Matrix-Predictive Uniform Law Enforcement Selection Evaluation (M-PULSE™) Inventory

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Technical Manual

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About the Authors

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Robert D. Davis, Ph.D., M.P., is a licensed Medical Psychologist, Clinical Psychologist, and Clinical Neuropsychologist in Baton Rouge, Louisiana. He is a co-owner (with Dr. Rostow) of RD Associates, LLC, a largely forensic private practice; he is also a partner of Matrix, Inc., the Police Psychological Services Corporation. He is Board Certified in Medical Psychology, Forensic Psychology, Forensic Neuropsychology, and Police Psychology. Dr. Davis is nationally known for the development of inferential statistical models for the actuarial prediction of discrete liabilities in law enforcement.

Dr. Davis is the senior author of the M-PULSE™ (Matrix-Predictive Uniform Law Enforcement Selection Evaluation) Inventory, a stand-alone screening test used for officer selection in the pre-offer phase which can be used for rank-ordering potential candidates. He is also senior author of the M-PULSE: Psychological Methodology, a comprehensive post-offer battery for police psychologists utilizing impressionistic decision-making models to predict each of the 18 liabilities in law enforcement. Dr. Davis is a graduate of LSU's 147th Law Enforcement Basic Training Academy, and provides numerous professional services to a myriad of agencies including law enforcement selection, critical incident/stress debriefing and diffusion, fitness-for-duty evaluations, officer advisory programs, and executive consultation. He is the junior author of *A Handbook for Psychological Fitness-for-Duty Evaluations in Law Enforcement* (Rostow & Davis, 2004), and more than two dozen peer-reviewed publications in Police Psychology.

Cary Dennis Rostow, Ph.D., M.P.

Cary Dennis Rostow, Ph.D., M.P., attended the University of Illinois in Chicago and received his Ph.D. in Clinical Psychology at Northern Illinois University in DeKalb, IL. Dr. Rostow is a Medical and Clinical Psychologist and Clinical Neuropsychologist at Matrix, Inc., in Baton Rouge, Louisiana. He has a Post-Doctoral Masters Degree in Psychopharmacology and holds the Diplomat in Police Psychology from the Society for Police and Criminal Psychology. He is nationally known for the development of Police Psychology services including stress training, fitness-for-duty evaluations, and police candidate pre-employment screening.

Dr. Rostow has held a number of academic appointments in his long career. He is the senior author of *A Handbook for Psychological Fitness-for-Duty Evaluations in Law Enforcement* (Rostow & Davis, 2004), and is also an author of the Matrix-Predictive Uniform Law Enforcement Selection Evaluation (M-PULSE™), a psychological methodology and inventory for determining the actuarial probability of civil rights violations and other misconduct for law enforcement officer candidates and law enforcement officers.

Publisher's Preface

MHS is pleased to announce the release of the Matrix-Predictive Uniform Law Enforcement Selection Evaluation (M-PULSE™) Inventory. After many years of research and data collection by both the authors and MHS, we are excited to present this highly innovative tool that directly assesses the future job-performance liabilities of law enforcement officer candidates. Law enforcement agencies are constantly being faced with serious legal, monetary, and other liabilities and consequences associated with officer conduct. A tool like the M-PULSE is a must-have for agencies concerned with reducing the risks associated with officer on-the-job behavior.

The M-PULSE Inventory is the result of the hard work of many talented individuals and an exciting partnership with Matrix Incorporated. Dr. Robert Davis and Dr. Cary Rostow have many years of experience in the field of Police Psychology, which they have used to develop and refine the M-PULSE Inventory. I extend my gratitude to them, as well as to the following employees at MHS who helped to refine and implement the M-PULSE Inventory from data collection through programming, manual construction, and marketing:

- Steve Otto, Business Development Consultant
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Author's Acknowledgements

1 Introduction

Description

The Matrix-Predictive Uniform Law Enforcement Selection Evaluation (M-PULSE™) Inventory is an easily administered self-report measure that assesses the future job performance of law enforcement applicants. It was designed to measure a candidate's attitudes, values, beliefs, and behaviors related to law enforcement and its culture. The M-PULSE Inventory assists agencies, risk managers, and psychologists in sorting and/or hiring suitable individuals for law enforcement personnel, thus minimizing the potential of hiring individuals who violate the law, or the standards, ethics, or regulations of law enforcement agencies. By reducing the chance of hiring officers who demonstrate misconduct, agencies may reduce associated monetary and reputational liabilities, and may also maximize performance and efficiency in their public safety mission.

Applications

The M-PULSE Inventory is a pre-conditional liability risk assessment instrument that can be used either pre-offer, or post-offer during the hiring process. As a pre-offer tool, law enforcement agencies may use results from the M-PULSE Inventory with other sources of information to achieve a greater understanding of the nature of each candidate, and to provide comparisons to other candidates. Candidates may, therefore, be screened for liability risk potential. Agencies may find the pre-offer screening application of the M-PULSE Inventory to be an especially beneficial and valuable tool when the number of applicants exceeds the positions available.

As a post-offer tool, psychologists who use clinical decision-making methods for selection evaluations can use the M-PULSE Inventory as part of a battery of other instruments to predict more specific and detailed liabilities. Alternatively, the inventory can be used as part of the M-PULSE: Psychological Methodology developed by the authors. The M-PULSE: Psychological Methodology comprises the M-PULSE Inventory, in addition to a variety of other data-gathering tools, to provide a comprehensive post-offer assessment, involving the actuarial prediction of a candidate's exact liability potential across each of the 18 liability areas in law enforcement.

Another appropriate use for the M-PULSE is for follow-up assessment. In addition to the inventory, standardized follow-up forms are also available to agencies. The M-PULSE Follow-up Form can be used to track the liability-related performance of officers after they are hired, providing local and regional normative development that helps link the inventory to the local candidate population and agency.

This manual focuses on the use of the M-PULSE Inventory as a pre-offer screening tool for law enforcement agencies. For more information about the M-PULSE: Psychological Methodology, contact the publisher, Multi-Health Systems Inc. (MHS), or the authors at Matrix Incorporated in Baton Rouge, Louisiana.

Key Features

The M-PULSE Inventory has a number of key features listed below:

- Directly assesses future job-performance risks
- Reduces forensic liability for law enforcement agencies
- Assesses response bias and test attitude
- Acceptable wording of law enforcement items for police candidates
- Psychometrically sound with excellent reliability and validity
- National normative sample consisting of 2,000 candidates
- 455-item statements
- 50 to 90 minutes administration time
- North American grade 6 reading level
- Simple web and paper-based administration
- Web-based scoring that produces a report in minutes
- Report in a language style that is usable by police executives and risk managers
- Option to generate Follow-Up reports over a three-year time period

The Concept of Liability

Legal or forensic liability is an ongoing concern in the field of law enforcement. Liability poses significant costs to police departments in both monetary and reputational terms. From a monetary perspective, the cost to the agency for both criminal and civil suits can be a significant burden upon their budgets. Furthermore, the time and energy involved in handling liability can have an impact on the efficiency and effectiveness of the agency by creating an unnecessary distraction from the primary duties of protecting the public. In addition, misconduct liability can

negatively affect the internal morale of the department. From a reputational perspective, the impact is not easily measured, but the reduction in public trust only makes it harder for the department to enforce laws, maintain their tax base support, and obtain authorization to hire personnel or acquire equipment.

The M-PULSE Inventory takes into account specific liabilities that are associated with officer misconduct. The 18 liability misconduct areas that are assessed are as follows:

1. Interpersonal Difficulties
2. Chemical Abuse/Dependency
3. Off-Duty Misconduct
4. Procedural and Conduct Mistakes
5. Property Damage
6. Misuse of Vehicle
7. Motor Vehicle Accidents
8. Discharge of Weapon
9. Inappropriate Use of Weapon
10. Unprofessional Conduct
11. Excessive Force
12. Racially Offensive Conduct
13. Sexually Offensive Conduct
14. Lawsuit Potential
15. Criminal Conduct
16. Reprimands/Suspensions
17. Potential for Resignation
18. Potential for Termination

Content Areas

In addition to these liability outcomes, there are additional Empirical Scales or content areas that measure behavioral and attitudinal orientations. Derived from factor analysis, the sixteen Empirical Scales detail four main categories (and their respective subcategories) related to law enforcement job performance, as described below:

1. Negative Self-Issues
   a. Negative Emotions
   b. Egocentricism
   c. Inadequate Views of Police Work
   d. Poor Emotional Controls

5. Negative Perceptions Related to Law Enforcement
   a. Inappropriate Attitudes about the Use of Force
   b. Overly Traditional Officer Traits
   c. Suspiciousness

4. Unethical Behavior
   a. Lack of Personal Integrity
   b. Negative Views of Department/Leadership
   c. Amorality

4. Unpredictability
   a. Risk Taking
   b. Novelty Seeking

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Target Population

Individuals using the M-PULSE Inventory as a pre-offer tool include, but are not limited to, recruiters, those in human resources, or other agency personnel involved in the assessment or evaluation of law enforcement candidates for selection purposes.

User Qualifications

The M-PULSE Inventory can be easily used by individuals who work in law enforcement hiring and selection. Users of the M-PULSE Inventory as a pre-offer tool[1] should be familiar with this manual and should review the administration and scoring process periodically. Although the M-PULSE Inventory can be easily administered and scored by individuals with a wide variety of professional backgrounds, the ultimate responsibility for interpretation must be assumed by an individual who can professionally appraise the limitations of such screening and testing procedures.

Ethical and Legal Considerations

Cautionary Remarks

Since the M-PULSE Inventory is an objective, self-report measure, it is not recommended for individuals who are unwilling or unable to respond honestly to a self-report questionnaire. The M-PULSE Inventory is also not recommended for individuals who are disoriented or impaired, who possess poor reading abilities (i.e., below a grade 6 reading level), or who are not proficient in the language in which the test was administered.

Legislative Compliance

The M-PULSE has been reviewed by independent legal counsel to determine appropriateness for use under ADA, Title VII, and EEOC guidelines. The review states:

> *"We have reviewed Title VII, the ADEA, Executive Order 11246, as amended, the ADA and all published regulations and guidelines thereunder relating to employment testing, including the Uniform Guidelines on Employee Selection Procedures. Based on our review, it is our opinion that, as of the date hereof, the Inventory is not prohibited by Title VII, or any of the aforesaid EEO laws or published rules, regulations,*

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[1] Note that the user qualification requirement is different when using the M-PULSE Inventory as part of a post-offer battery of psychological screening or evaluation. Contact the publisher, MHS for further details.

guidelines and court decisions interpreting these laws where the Inventory is administered and interpreted in accordance with the directions in the Inventory's User's Manual."

A complete copy of the legal opinion is available through the publisher, Multi-Health Systems Inc.

Potential Misuse

As with all screening instruments, there is an inherent degree of measurement error of which users need to be aware. The M-PULSE Inventory is not meant to be the sole criterion for decision making and users are cautioned against drawing unsupported interpretations. Combining information from the M-PULSE Inventory with information gathered from other measures, in addition to interviews and discussions with the candidate, will provide a more comprehensive view of an individual than might be obtained from any one source. It is important to consider any factors that may bias results, such as socially desirable responding, misunderstanding of item content, or carelessness in responding. A careful examination of the validity indicators that are included in the inventory is a required part of the interpretation process.

Disclaimer of Responsibility

The publisher, MHS, is not responsible for misuse of the M-PULSE Inventory. If users intend to use the M-PULSE Inventory in any way other than that which is outlined in this manual, then the user must justify the new use and collect new normative data if necessary.

State-Specific Hiring

Each state has its own Peace Officer Standards and Training organization (POST) that is responsible for setting or evaluating standards for hiring and selection. Sometimes, such as in the case of California, specific criteria have been determined by a state POST, and selection committees are required to meet these criteria. The M-PULSE has been mapped to the California POST dimensions and the results are found in appendix B. For more information on how the M-PULSE Inventory can relate to other individual state-specific criteria, contact the publisher, Multi-Health Systems Inc. (MHS).

2 Administration and Scoring

This chapter includes important administration and scoring information for the M-PULSE Inventory. Guidelines to keep in mind during all administrations are outlined first, and are followed by descriptions of the available administration options. A step-by-step procedure is then outlined to simplify the administration process. Details on online scoring and the resulting Profile Report are provided, as well as information on how to handle omitted items.

General Administration Guidelines

This section contains several guidelines to keep in mind when administering the M-PULSE Inventory. Information on the proper placement of the inventory in the hiring process, administration time, optimum testing environment, and testing accommodations are all outlined for easy reference.

When to Administer

The agency makes the decision of when to administer the M-PULSE Inventory and how the results will be used. As a pre-offer tool, individual agencies should consider when the inventory (along with other requirements) is most suitable in the hiring process. Regardless of when the M-PULSE Inventory is administered, there are a few important ethical considerations to consider. The M-PULSE Inventory should be administered only after its purpose has been explained and candidates have given consent. Although the M-PULSE Inventory is not a medical test, administrators should be familiar with their local or state regulations regarding any specific legal requirements for when a test can be administered for law enforcement pre-employment. Administrators should also be familiar with this manual and other testing requirements before administration.

For law enforcement executives and/or law enforcement human resource personnel that use the M-PULSE Inventory during the pre-offer phase of hiring, the timing of administration and how the results are used in the process are of great importance. The pre-offer stage of hiring typically involves a five- to seven-step process, required as part of demonstrating due diligence. These steps often involve the following:

1. Civil Service Examination
2. Application Process
3. Background Investigation
   a. Criminal History Checks
   b. Driving Record Checks
   c. Credit Checks
   d. Former Employment Checks
   e. Personal Reference Checks
   f. Development of Secondary Sourcing from Personal References
4. Polygraphy
5. Interview Panel or Process

Candidates or applicants who successfully transition through this process are often given conditional offers of employment, which begins the post-offer phase of hiring. At the pre-offer phase, the M-PULSE Inventory best fits between the application process (# 2) and background investigation (# 3). Since the costs associated with the background investigation are significant in terms of man-hour investment and other resources, the M-PULSE Inventory provides a means by which candidates can be rank-ordered or sorted in terms of desirability or hiring potential to determine those candidates in whom to invest these resources first.

This task may be accomplished by first determining those candidates with below average to average Validity Scales (particularly Impression Management), and Liability Scale elevations that are also average or below. Candidates with significant elevations on the Validity Scales (particularly Impression Management) may produce unreliably low Liability Scale configurations due to their approach to the test, which may reflect social desirability, denial of common human faults, attempts at deception, and so on. Such candidates should be rank-ordered or sorted lower than other candidates in terms of potential for hiring.

A second category of candidates requiring a lower rank-order or sorting position include those with below average to average Validity Scales (particularly Impression Management) combined with significantly high elevations on the Liability Scales. These candidates represent individuals who approached the test in an open and honest manner, but whose pattern of responding is similar to officers who demonstrate the given liability. There are no universal rules regarding which or how many significant elevations on the

Liability Scales determine the level of rank-order; these criteria should be agency-specific. There may be certain liabilities that a given agency wants to minimize more than others, while some liability elevations may be mitigated by supplemental training, supervision, and Field Training Officer (FTO) guidance.

Administration Time

Most candidates will need between 50 to 90 minutes to complete the M-PULSE Inventory; however, some respondents (e.g., those with reading difficulties, or whose native language is not English) may take longer to complete the assessment. While there are no imposed time limits for completing the M-PULSE Inventory, candidates should complete the assessment in a single sitting.

Appropriate Testing Environment

The M-PULSE Inventory can be administered to officer candidates, either individually or in a group setting. Online and paper-and-pencil options are both available. Regardless of which method is used, the M-PULSE Inventory should be completed in a room that has good lighting, adequate ventilation, a comfortable temperature, and is quiet and relatively free from undue distractions. The room should also provide an adequate workspace with a smooth surface and appropriate seating.

Testing Accommodations

The M-PULSE Inventory was designed as a self-report instrument; the normative data was collected with test-takers reading and responding to items independently and without accommodation. If individual testing accommodations are required, the user must understand that the results may be invalidated. The publisher, MHS, accepts no responsibility for non-standard test administrations.

Administration Options

There are two options for administration: online and paper-and-pencil. Guidelines for both types of administration are outlined in this section. Helpful tips are also included for administering the M-PULSE Inventory in a group setting.

Online Administration

The most convenient and efficient method of administering the M-PULSE Inventory is online. One benefit of the online version is that administration takes less time than the paper-and-pencil version. Another benefit is that no additional materials are required except for a computer with reliable internet connection. There is also no need to

purchase and wait for the shipment of item booklets and response forms. Before completing the inventory online, the administrator must remind respondents to complete the M-PULSE Inventory in a quiet testing environment. In order to ensure the identity of the individual completing the inventory, a declaration of identity has been built into the beginning and end (respectively) of the online M-PULSE Inventory as follows:

> **IMPORTANT NOTICE**
> This assessment must be completed by the candidate only and no other individual. There may be other checks throughout the application process (e.g., polygraph) designed to determine whether or not you completed the M-PULSE™ Inventory without any assistance.
> ───────────
>
> Thank you for completing the M-PULSE™ Inventory. Please verify below that you are the actual candidate, and that you completed the entire assessment by yourself. If it is discovered that the candidate completed any part of this assessment with help from another individual or other aid, the candidate may be disqualified from the selection process.
>
> ☐ I am the actual candidate and I completed the entire assessment by myself.

Paper-and-Pencil Administration

The paper-and-pencil administration option is beneficial when testing in large groups and/or internet access is not available. With this method, the following materials are required:

- M-PULSE Inventory Item Booklet
- M-PULSE Inventory Response Form
- A dark, soft, lead pencil with an eraser (or pen, if a pencil is not available)

Group Administration

The objective, self-report format of the M-PULSE Inventory makes administration possible for groups as well as individuals. There are, however, a few minor adjustments to the administration procedure in a group situation. First, the administrator assumes that everyone in the group has the minimally required reading skills (see *Readability of the M-PULSE Inventory,* in chapter 5).

Second, the administrator must provide enough space between all candidates to ensure privacy. Finally, respondents must also be reminded to complete the items independently without asking for input from others. Otherwise, proceed in the same manner as an individual M-PULSE Inventory administration.

Step-by-Step Administration Procedure

Since the M-PULSE Inventory is easy to administer, the administrator requires minimal special training. The administrator should, however, be familiar with (or be given clear instructions regarding) details about the administration process, such as obtaining informed consent, maintaining confidentiality, avoiding bias, debriefing respondents, and maintaining test protocol and security. The following section outlines all the steps necessary for a proper M-PULSE Inventory administration.

Step 1: Set up the administration.

Whether administering online or on paper, it is strongly recommended that you set up ID numbers for each respondent, instead of using proper names. The respondent's ID should be entered in the "Last Name or ID" and "First Name or ID" fields. Note that the information entered into these fields will appear on the front of, and at the top of, every page in the M-PULSE Profile Report. Therefore, if the respondent is to remain anonymous during result interpretation, only the assigned ID number will be included in the report. It is the administrator's responsibility to keep a database that links the ID numbers to the names of the candidates.

Before beginning the M-PULSE Inventory, collect any preliminary information that may be deemed necessary (e.g., photocopy the picture ID of each candidate). Introduce yourself (and any assistants) to help the candidate relax, as well as to minimize any anxiety about the process. At this time, check if the candidate requires any special accommodations in order to complete the M-PULSE Inventory. If a candidate in an individual administration requires disability accommodations, determine if the disability can be reasonably accommodated at that time. In a group-testing environment, remove the individual from the group, and inform the candidate that you will address the issue after getting the others started.

Before presenting the M-PULSE Inventory to the respondent, you may find it beneficial to read the following brief introduction verbatim:

> "Good morning. I am _____. This test is just one part of many requirements to work in law enforcement. Relax and just be truthful with your responses. We do not expect you to be perfect; we know that you make mistakes. We do, however, expect honesty. If you have a question, feel free to ask us when you have the opportunity. Before we get started, are there any questions?"

Once this has been accomplished, provide the M-PULSE Inventory (either paper-and-pencil components, or online access details) to the respondent and instruct him/her to wait for explicit instructions before beginning.

Step 2: Obtain informed consent.

"Informed consent" means that the respondent must be told why the M-PULSE Inventory is being used; once informed, he/she must then agree to complete the assessment. The M-PULSE Inventory should not be administered in a misleading fashion in order to obtain specific results. Notify the respondent that unless required by law, personal information will not be released to any person or institution without the informed consent of the respondent or of an authorized representative. Advise the respondent that he/she is free to withdraw from the administration process at any time.

Avoid any action that may result in biased answers. The respondent must answer the items independently without consulting others. During administration, the respondent may ask questions. Questions that involve clarification of instructions are straightforward to answer; however, some questions are more specific and may demand specific answers. It is best to defer questions until all of the items have been answered.

If a response is required during an administration, answer as neutrally as possible. For example, if the respondent is unsure how to rate an item, use the following explanation: *"I know that for some questions, it is difficult to know how to respond, but please try to do the best you can."* If the respondent is still unable to choose an answer for an item, re-read the statement and ask the respondent if he/she "generally agrees or disagrees" with the statement. This intervention usually reorients the respondent and elicits a response for the item. If possible, no item should go unanswered.

Step 3: Instruct the respondent.

Instructions are self-explanatory in the online version, but administrators may wish to verbally highlight specific instructions in a paper-and-pencil administration prior to completion of the assessment.

After receiving informed consent, draw attention to the response form, and read the following test instructions verbatim:

> "Okay. Let's get started. Please begin by completing the demographic information on the front page of the response form. Be sure to print the information in the boxes provided and completely shade in the cor-

responding bubbles as shown in the top right-hand corner of your response form. To make a change, either fully erase the original bubble or draw an X through it, and fill in the correct bubble.

"The candidate's ID number (or Name) and Date fields are self-explanatory. Please provide that information now.

(Pause sufficiently to allow the candidate(s) to provide the information requested.)

"Now proceed to complete the rest of the demographic information.

(Pause sufficiently to allow the candidate(s) to provide the information requested.)

"Number of years of education is the last grade you completed in school or the number of years of formal education you have. For example, if you quit school in the 11th grade, put 10; if you graduated from high school, put 12; if you completed 2 years of college, put 14 (or 15, if applicable). If you have a college degree, count the number of years for which that degree was designed, no matter how long it took you—put 14 for an Associate's Degree, 16 (or 17) for a Bachelor's Degree, and so forth.

"You may now flip the page and fill in the bubble that best describes your living circumstances.

"Please neatly print the name of the agency for which you are seeking employment; this is the department that sent you for this evaluation. Also indicate the type of agency. Job Position is the title of the job(s) for which you are applying.

(Pause sufficiently for completion of this information.)

"You may now begin answering the items found in the M-PULSE Inventory Item Booklet. Carefully read the instructions found on page 2 of the Item Booklet. Do not write or make any markings in the Item Booklet. Put all answers on the response form. For each statement, fill in the appropriate bubble—Strongly Agree, Agree, Disagree, or Strongly Disagree. Be sure to fill in only one bubble per item. The M-PULSE Item Booklet contains statements that ask about your opinions and preferences. There are no right or wrong answers. Remember, your best opportunity for a favorable recommendation from this evaluation requires you to be truthful. Read the questions carefully and tell the truth about yourself."

Step 4: Collect the inventory.

Before collecting the completed inventory, ask the respondent to check his/her response form for omitted items, and to answer as many of them as possible. Allow some time for the respondent to check for omitted items, and then collect the item booklet and response form.

Step 5: Debrief the candidate.

It is recommended to debrief a candidate after he/she has completed the M-PULSE Inventory. The simplest way is to reiterate that the M-PULSE Inventory is being used as part of the assessment process to determine whether the job is a good fit for the individual. An example of debriefing may include a statement like the following:

"Thank you for completing the M-PULSE Inventory. This test is used to compare your attitudes, values, and beliefs with the test results of officers who have a history of public service in the past. It represents just part of the selection process, and information will be combined with other data to inform the overall hiring decision."

Step 6: Send M-PULSE Inventory response forms to MHS for processing.

Completed M-PULSE Inventory response forms can either be mailed in (preferred method) or faxed in for processing. Within 48 hours of receiving scannable response forms, forms will be scored and reports will be available in the administrator's online MHS Scoring Organizer account for easy retrieval. The mail-in and fax-in instructions are outlined next.

Mail-in Instructions

Photocopy the completed M-PULSE Inventory response forms. Keep the copies for your records, and send the originals to MHS at one of the addresses below. A traceable courier is recommended.

MHS Scoring Department
3770 Victoria Park Avenue
Toronto, Ontario
Canada M2H 3M6
Tel. 1.800.268.6011
Fax. 1.888.540.4484

or

MHS Scoring Department
P.O. Box 950
North Tonawanda, New York
14120-0950
Tel. 1.800.456.3003
Fax. 1.888.540.4484

Fax-in Instructions

The completed scannable response form(s) can also be faxed to the MHS Scoring Department (see *Mail-in Instructions* for fax number). Provided that the response forms were completed properly and the fax was transmitted clearly and successfully, the M-PULSE report(s) will be available in the administrator's MHS Scoring Organizer account within 48 hours.

Note: Special Handling charges may apply for administrators who wish to receive their reports via email or courier. Contact the MHS Scoring Department for further details.

Online Scoring

The administrator can score an online M-PULSE assessment and generate a Profile Report with a few clicks of the mouse. Alternatively, the administrator can also type responses from a completed M-PULSE response form into the MHS Scoring Organizer for automatic scoring and report generation. See the *M-PULSE Inventory Online Getting Started Guide* for further details.

Profile Report

The M-PULSE Profile Report provides results in graphical format for the 18 Liability Scales, 16 Empirical Scales (4 main scales, plus 12 subscales), and 2 Validity Scales. The report also lists the item responses that were indicated by the respondent for each of the 455 M-PULSE items. For the interested administrator, a separate Administrator's Section is included at the back of the report that details the raw scores and standard scores (*T*-scores) for each scale and subscale. This section also details results for the California POST (C-POST) dimensions (see appendix B for more details on the California POST dimensions).

See appendix D for a sample M-PULSE Inventory Profile Report.

Omitted Items

All efforts should be taken to ensure that all M-PULSE Inventory items are completed without any omissions. If a respondent is unable to choose an answer for an item, it is acceptable for the administrator to re-read the statement, and ask the respondent if he/she "generally agrees or disagrees" with the statement. This intervention usually elicits a response for the omitted item. If, for some reason, items are still omitted, the maximum allowable number of omissions is 23 (roughly 5% of items). If this number is exceeded, the M-PULSE Inventory will be considered invalid; therefore, it is very important to encourage candidates to answer every item. Omitted items will automatically be treated as neutral responses (scored as 2.5), which reduces the accuracy of the assessment. The M-PULSE Inventory results will be less valuable and potentially less valid if answers are missing.

The criterion of 5% omitted data is also applied to the subscales. This criterion translates into a maximum of between one and six omitted items, depending on the subscale (see appendix C). It is permissible for certain subscales to be unscoreable due to omitted data yet still provide an overall M-PULSE Inventory Profile Report, assuming less than 23 items are omitted overall. However, if omitted data prevents scoring of either M-PULSE Validity Scale, any or all remaining scores may be invalid and should be interpreted with extreme caution.

3Interpretation

Understanding the components of the M-PULSE Inventory is key to effective use during the hiring process. There are three sets of scales that make up the M-PULSE Inventory—the Validity Scales, the Liability Scales, and the Empirical Scales. The Validity Scales assess whether or not the candidate's response style and test-taking attitude may have affected the results. The Liability Scales are the specific job-related adverse outcomes that can be predicted by the M-PULSE. Finally, the Empirical Scales are derived from factor analysis, and reflect distinct groups of attitudes and behaviors that are related to law enforcement job performance.

Assessing the Validity of Responses

A review of scores on an M-PULSE report should begin by examining the results of the Validity Scales. Evaluating the validity of the candidate's responses is crucial because invalid input can produce erroneous and misleading results. The M-PULSE Inventory provides two distinct validity indices—Impression Management and Test Attitude. If either validity index score is elevated or unscorable, the M-PULSE Inventory results may be inaccurate and consequently may be considered invalid.

Impression Management

The Impression Management (IM) validity subscale consists of 16 items. Sample items include "I never drive faster than the speed limit" and "I have never told a lie." Respondents who score high on this subscale may be responding in a socially desirable manner, or are trying to present themselves in an overly favorable and unrealistic way. They may be uncomfortable admitting to beliefs or actions that may be interpreted negatively and they may be reluctant to disclose personal information. They may also be trying to present themselves as better than others.

If an individual scores high on the IM subscale, then scores on all the other scales (i.e., Liability and Empirical) may appear more favorable than is appropriate. In general, scores in the high range strongly suggest that the rest of the test is invalid. Scores in the moderate to high range suggest that the rest of the test is suspect, or possibly invalid. It is, however, possible that an individual is overly virtuous and has actually led a life free from undesirable behaviors. If

this is the case, scores on the IM scale may be verified by information collected in the background investigation.

Test Attitude

The Test Attitude validity subscale consists of 4 items, and assesses individuals who are responding in a non-compliant fashion. Sample items include "I have not been paying attention to these statements" and "This test is not important to me and my responses are only guesses." High scores are generally obtained by individuals who have a negative or unhelpful/uncooperative attitude toward the testing process. They may give little thought to their answers to the inventory, respond randomly, or "make up" answers as they go along. In general, high scores on this subscale indicate an "I don't care about your test" attitude. As a result, other scores on the M-PULSE Inventory may be affected in unpredictable ways, and should not be relied upon as an indication of test-taker suitability.

Liability Scales

Results from the Liability Scales on the M-PULSE Inventory are probably the most pertinent at the pre-offer stage for prediction of future officer liability, because they are most directly linked to serious officer misconduct. These scales were generated by the ongoing follow-up of the post employment work history of law enforcement officers. Data were collected over a multi-year period on hired officers and then linked to responses on the inventory in order to generate the scales through regression analyses. It is extremely important to note that these scales are not intended to be used alone when making decisions about officer candidates. Although they provide useful correlations, these scales need to be combined with other information and form only one component of a comprehensive hiring process.

A high score on any Liability Scale indicates that there is some association between a candidate's pattern of responses and the later risk of a future on-the-job negative outcome. Generally, a high score serves as a cautionary indicator about the individual. However, candidates whose approach to the testing involves positive impression management may produce uniformly low scores across these dimensions that have also been associated with problematic job performance. A brief description of the 18 liability areas is provided next.

Interpersonal Difficulties

This liability category predicts candidates who may have difficulty with interpersonal skills. Interpersonal difficulties suggest that the individual lacks the ability to effectively relate to, or interact with others, including colleagues, supervisors, and the general public. When an individual's job description requires a great deal of interaction, interpersonal difficulties can predict a negative impact on job performance. Candidates who have significant family stress or relationship problems (e.g., hostile divorces, extramarital affairs, domestic violence, etc.) may be expected to score high on this scale.

Chemical Abuse/Dependency

This liability category indicates candidates who are likely to experience a problematic use or abuse of mood-altering chemicals. Note that this scale does not relate to current chemical abuse or dependency, but rather vulnerability to such issues.

Off-Duty Misconduct

This liability category highlights candidates who are likely to demonstrate a significant breech of judgment and propriety off duty. Numerous behaviors fall into this category including, but not limited to, public drunkenness, street fighting, sexual indiscretions, and so forth. Essentially, this category involves any behavior that is generally considered to be termed "conduct unbecoming to an officer" that occurs off-duty and/or has a high likelihood of damaging the reputation of the department and the law enforcement profession.

Procedural and Conduct Mistakes

Procedural and conduct mistakes are typically reported by supervisors and relate to problems with ongoing job-related duties, such as failure to follow department arrest or vehicle-use policies, failure to report required observations or information, inappropriate record keeping, and so forth. Candidates who score high on this scale are likely to make such errors in the future. These errors may lead to the inability to charge or prosecute suspects and may cost the department reputation and money.

Property Damage

This liability category predicts candidates who are likely to damage official property, or generally demonstrate a lack of concern for the care and upkeep of property that does not belong to them. Examples include the failure to maintain an official vehicle in appropriate working condi-

tion, operation of any equipment that is likely to result in damage, or poorly considered actions that result in direct property loss or damage.

Misuse of Vehicle

This liability category predicts those officers who may use an official vehicle inappropriately. Inappropriate behaviors include having an unauthorized passenger, purchasing or possessing alcohol while in the unit, engaging in inappropriate chases, speeding and reckless operation of vehicles, or demonstrating the inappropriate use of lights and/or siren.

Motor Vehicle Accidents

This liability category predicts candidates who are likely to be involved in either on-duty or off-duty at-fault motor vehicle accidents.

Discharge of Weapon

This liability category predicts candidates who are likely to fire their weapon in the line of duty (whether justified or not). It appears to predict the willingness to use force in both justified and non-justified situations.

Inappropriate Use of Weapon

This liability category predicts candidates who are likely to demonstrate the inappropriate use of any weapon (e.g., firearm, baton, chemical spray, etc.). This category includes both on-duty and off-duty inappropriate weapon use.

Unprofessional Conduct

This liability category is similar to the Off-Duty Misconduct scale, except that it predicts candidates who are likely to demonstrate inappropriate or unacceptable behaviors while on duty. Although many behaviors can fall into this category, the majority of unprofessional conduct incidents reported by supervisors include verbal abusiveness and aggressiveness, rudeness or otherwise offensive language use, and ethical violations or breeches of departmental policies regarding officer conduct.

Excessive Force

This liability category predicts candidates with sustained findings of excessive force or physically aggressive behaviors that are deemed to be inappropriate or unwarranted.

Racially Offensive Conduct

This risk category predicts candidates whose behavior is racially inappropriate. The behaviors that are included in this category include the use of racial epithets, inappropriate condescending and racially-based verbalizations and attitudes, and selective enforcement actions that target a particular racial or ethnic group.

Sexually Offensive Conduct

This liability category predicts candidates who have demonstrated significant violations of sexual boundaries. This category includes sexual harassment, inappropriate sexual verbalizations, sexual activity with fellow officers, frequenting prostitutes, and accepting sexual favors in lieu of appropriate law enforcement actions.

Lawsuit Potential

This liability category predicts candidates who are likely to have claims filed against them or likely to be sued in connection with law enforcement duties. It should be noted that the event which serves as the subject of the claim or litigation does have to be sustained as a breech of conduct.

Criminal Conduct

This liability category predicts candidates who are likely to be arrested, charged, detained, or convicted of criminal activity or corruption charges of any kind while serving as a law enforcement officer.

Reprimands/Suspensions

This category of liability predicts candidates who are likely to receive formal written reprimands and/or suspensions for breeches of acceptable conduct from police commanders or law enforcement executives.

Potential for Resignation

This risk category pertains to candidates who may potentially discontinue their employment with the department under favorable conditions. Although the officer may not have performed poorly, quitting the department under favorable conditions represents a significant cost to the department and may mask problems that are being suppressed or ignored by an agency.

Potential for Termination

This category includes officers who were terminated (not simply disciplined) because they failed to complete training or meet conditional requirements for employment, failed to comply with department regulations, or were terminated due to insubordination, excessive citizen complaints, corruption/criminal conduct, neglect of duty, and excessive unexcused absenteeism.

Empirical Scales

The Empirical Scales on the M-PULSE Inventory gauge attitudes, values, and beliefs that have direct relevance to law enforcement work. These scales cover four main areas: Negative Self-Issues, Negative Perceptions Related to Law Enforcement, Unethical Behavior, and Unpredictability. Higher scores are associated with greater concerns for the individual. Each area is broken down into various subcomponents or subscales. The following sections describe the meaning of each area and its subscales in detail.

Negative Self-Issues

There are four components of Negative Self-Issues as assessed by the M-PULSE Inventory—Negative Emotions, Egocentricism, Inadequate Views of Police Work, and Poor Emotional Controls.

The **Negative Emotions** subscale relates to poor frame of mind, feelings of unhappiness, and lack of confidence in one's abilities. High scores on this subscale may also be associated with shyness and the tendency to withdraw from common social activities. Sample items from the Negative Emotions subscale are "I pout and sulk" and "I am often sad."

The **Egocentricism** subscale captures arrogance and a dislike for rules and authority. This subscale includes items such as "I don't like being told what to do," and "When a friend becomes very successful, it makes me feel like a failure." Individuals who score high on this subscale are often perceived as "show-offs."

The third subscale, **Inadequate Views of Police Work**, reflects a lack of motivation to excel as a good police officer and a distorted view of what policing involves. Sample items include "Authority is important and should be obeyed," and "Being a good officer is very important."

Finally, the **Poor Emotional Controls** subscale assesses individuals who have a tendency to have temper outbursts, under-developed behavioral control skills, and moodiness. Examples of items on this subscale are "I can be cruel" and "Even a skilled and capable officer could lose his or her temper with family members."

Negative Perceptions Related to Law Enforcement

Scores on the Negative Perceptions Related to Law Enforcement scale will be high for individuals who have negative attitudes toward law enforcement work and the law enforcement environment. The three subscales include Inappropriate Attitudes about the Use of Force, Overly Traditional Officer Traits, and Suspiciousness.

The **Inappropriate Attitudes about the Use of Force** subscale assesses the degree of how individuals feel about the use of physical power or confrontational coercion. Individuals with high scores endorse attitudes that reflect the inappropriate use of force within law enforcement. Sample items from this subscale include "Suspects expect to be roughed up a little during an arrest" and "I like that cops have real power compared to ordinary citizens."

The **Overly Traditional Officer Traits** subscale mostly contains items that portray officers with unrealistically or stereotypically masculine traits. High scores on this subscale reflect individuals who have unrealistic perceptions of police officers, police attitudes, and police officer behavior, and tend to favor the view of officers as combat soldiers. Sample items include "If an officer is fearful, he or she should find another type of work" and "An officer should not show fear in public."

The **Suspiciousness** subscale has varied item content but most items involve distrust or suspicion towards others. Only a few of the items pertain directly to law enforcement; the rest are indirectly relevant. A high score on this subscale indicates individuals who may be excessively suspicious of the administrative and political regulation of law enforcement agencies. They may question the system, or argue that political motives or bureaucracy often override fairness in law enforcement decision making. Sample items include, "Many people have sneaky plans to gain an advantage over others" and "Offenders will accuse the arresting officer of some misconduct, whether it is true or not."

Unethical Behavior

The Unethical Behavior scale gauges a candidate's judgments, beliefs, and predispositions for items that relate to traditional morality; however, this scale does not purport to differentiate "good" from "bad," or "good people" from "bad people." The three subcomponents include Lack of Personal Integrity, Negative Views of Department/Leadership, and Amorality. High scores are associated with individuals who endorse ethics that are generally considered undesirable for police work.

The **Lack of Personal Integrity** subscale will be high for individuals who seem willing to cross ethical boundaries (e.g., to cheat, lie) for various reasons; they seem comfortable with unethical behaviors that they justify as necessary or desirable in order to protect their own interests. Sample items include "Sometimes deception is required to get what you want" and "Lying to avoid punishment is natural."

The **Negative Views of Department/Leadership** subscale will yield high scores for individuals who are unhappy with, or distrust, law enforcement or police department systems (or those in charge of these systems). They assume that these systems are disinterested in average officers. High scores suggest that the respondent associates the police department with poor morals. Sample items from this subscale include "High-ranking supervisors don't concern themselves with the average officer" and "Police commanders have forgotten what it is like to be a street cop."

The **Amorality** subscale is similar to the Lack of Personal Integrity subscale; however, while the Lack of Personal Integrity subscale focuses on inward beliefs, the Amorality subscale focuses on ethical opinions about others, specifically police officers. Individuals who score high on this subscale believe that police officers in general behave amorally in order to achieve a "higher good." Sample items include "Officers who do what they think is right will do more good than those who follow every regulation" and "It is alright for an officer to lie in order to avoid hurting someone's feelings."

Unpredictability

The Unpredictability scale is made up of relatively few items that are focused on behaviors associated with taking risks. In the best case, individuals who score high on this scale may be able to take chances when required; in the worst case, however, they may be reckless or take unnecessary chances because it is thrilling. The two subscales include Risk Taking and Novelty Seeking.

The **Risk Taking** subscale contains items that specifically relate to acts that are seen as thrilling or exciting because they are hazardous or dangerous. High scores are obtained by individuals who enjoy taking risks and seeking stimulation. Sample items are "I feel best after an exciting or risky activity" and "I am a thrill seeker."

Scores on the **Novelty Seeking** subscale will be high for individuals who like adventure and trying new experiences and behaviors. These individuals get bored with routines, and may frequently try different things or different ways of doing things. Sample items include "I am adventurous" and "I prefer new and different experiences to those that are familiar."

Brief Descriptions of High Scores

Tables 3.1 through 3.3 provide a quick reference tool for easy interpretation of each M-PULSE Inventory scale. Note that the descriptions are of high scores only.

Table 3.1. Brief Interpretation of High Scores on the Validity Scales

Scale	Brief Description of High Score
Impression Management	This candidate may have misrepresented himself/ herself in an overly positive way.
Test Attitude	The respondent had a negative attitude toward test-taking which may have affected the results in unpredictable ways.

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Table 3.2. Brief Interpretation of High Scores on the Liability Scales

Scale	Brief Description of High Score
Interpersonal Difficulties	At risk for problems with personal relationships.
Chemical Abuse/Dependency	At risk for problems associated with chemical abuse/dependency.
Off-Duty Misconduct	At risk for "conduct unbecoming an officer" including, for example, being drunk, fighting, indiscretions, etc.
Procedural and Conduct Mistakes	At risk for frequent occurrences of procedural and conduct mistakes.
Property Damage	At risk for causing damage to official property.
Misuse of Vehicle	At risk for the inappropriate use of a police vehicle.
Motor Vehicle Accidents	At risk for being involved in an at-fault motor vehicle accident.
Discharge of Weapon	At risk for firing a weapon in the line of duty (whether justified or not).
Inappropriate Use of Weapon	At risk for inappropriate use of a weapon.
Unprofessional Conduct	At risk for conduct that is inappropriate for an officer while on duty (e.g., verbal abusiveness, aggressiveness, rudeness, ethical violations).
Excessive Force	At risk for use of excessive force or aggressive behaviors that are inappropriate.
Racially Offensive Conduct	At risk for racially inappropriate behavior, e.g., racism or targeting a particular race in law enforcement.
Sexually Offensive Conduct	At risk for violation of sexual boundaries.
Lawsuit Potential	At risk of having a claim filed against him/her or for being sued.
Criminal Conduct	At risk of being arrested, charged, detained, or convicted of criminal activity or corruption.
Reprimands/Suspensions	At risk for receiving a formal written reprimand and/or suspension for breaches of acceptable conduct.
Potential for Resignation	At risk for resigning prematurely from the job as an officer.
Potential for Termination	At risk for being terminated for cause.

Table 3.3. Brief Interpretation of High Scores on the Empirical Scales

Scale*	Brief Description of High Score
Negative Self-Issues	Negative self-views that affect emotions, actions, and/or attitudes.
Negative Emotions	Poor mood, unhappiness, lack of confidence, and shyness.
Egocentricism	May think he/she is above the rules, may be seen as arrogant, or a "show-off."
Inadequate Views of Police Work	May lack high level motivation to become a good officer, and views of policing may not be adequate.
Poor Emotional Controls	Prone to temper outbursts, poor behavioral controls, and hard-headedness.
Negative Perceptions Related to Law Enforcement	Undesirable attitudes toward use of force, overly traditional views of police work, suspiciousness.
Inappropriate Attitudes about the Use of Force	Strong attitudes that condone the use of force in policing situations.
Overly Traditional Officer Traits	Unrealistically hyper-masculine or idealized views of police officers.
Suspiciousness	Distrust or suspicion regarding the intent of others.
Unethical Behavior	Beliefs and attitudes that are of questionable morality.
Lack of Personal Integrity	Willingness to cross ethical boundaries, or transgress (e.g., lie, cheat) to protect self-interests.
Negative Views of Department/Leadership	Distrust or suspicion regarding departmental systems or individuals who are in charge.
Amorality	Questionable ethical beliefs about police officers and others.
Unpredictability	Risk taking and thrill seeking.
Risk Taking	High enjoyment of risks and thrills.
Novelty Seeking	Adventurous and prefers new and varied experiences.

*Main scales shown in bold face type. Subscales appear below the associated main scale.

4 Development

This chapter focuses on the development of the M-PULSE Inventory. The history of police testing is outlined first, describing both cognitive and personality testing methods that did not succeed as valid testing models. This history is followed by a description of the legal standards that the M-PULSE had to adhere to during the development process. The development of the Validity Scales, Liability Scales, and Empirical Scales is then described, followed by a brief history of the California Post scales.

Rationale

Law enforcement executives have long been faced with the practical problem of selecting police officers from among a population of candidates. In the past, law enforcement executives tended to make these selections based upon personal preference, group membership, or the apparent ability of the applicant to exert physical force (Rostow & Davis, 2004). The political, legal, and social landscape has changed considerably since that era, and greater attention has been placed upon the legal and financial responsibility of the law enforcement agency to select, train, and supervise officers who will not violate the civil rights of community residents. There is now a clear need for a scientific and forensically defensible method of selecting officers who possess the lowest risk of acting in destructive and inappropriate ways, if the agency is to avoid later sanctions. This task requires psychological tools that have been developed specifically for the intended population and that allow for the prediction of the behaviors that police agencies and the courts have found to be objectionable, rather then assuming that certain personality or social traits will eventually forecast misconduct.

The development of the M-PULSE Inventory and subsequent M-PULSE: Psychological Methodology was driven by the need to develop a model that predicts specific law enforcement liabilities that can be embarrassing and costly to law enforcement agencies. It also took into account changes in employment law brought about by the Americans with Disabilities Act (1990) and other pertinent statutes. These changes required a shift from clinical judgment paradigms (which focused on mental illness and required highly trained medical specialists to employ) to predictive, statistical models of misconduct (which can be administered by human resources personnel) that predict liability potential with far greater accuracy and without discriminating against possibly disabled applicants who do not pose a liability risk.

Along with item content that relates specifically to law enforcement, the M-PULSE Inventory was produced with scales that pertain to law enforcement job performance (e.g., Excessive Force, Racially Offensive Conduct, Sexually Offensive Conduct) by using predictive algorithms that fairly compare inventory performance to known job outcomes. Because the M-PULSE Inventory is based on the actual conduct of many commissioned officers, reports can be easily understood and used by individuals who are responsible for hiring in law enforcement agencies.

Brief History of Police Testing

Historically, there were few guidelines for hiring police officers and decisions were solely at the discretion of Chiefs or Sheriffs and Commanders. By the 20th century, many police agencies had developed a civil service system that was meant to establish minimal standards of mental and physical capability for incoming officer candidates (Berg, 1998). The first psychological screening attempts were typically in the areas of cognitive/ability testing and personality/psychopathology testing.

Cognitive/Ability Testing

In the early 1900s, Louis Terman and his associates at Stanford University conducted a series of psychological studies with police officers and concluded that general intelligence (and "moral integrity") was essential for a successful officer (Terman & Otis, 1917). Mental and pedagogical tests in civil service examinations for policemen and firemen were very gradually introduced in experimental ways, predominantly under the assumption that applicants who were more intellectually capable and had better education made better police officers.

More recently, intellectual or cognitive testing has become a controversial topic because of perceived adverse racial impact. Since different racial subgroups consistently score differently in standard cognitive testing, any test that plays a role in the selection of officers may run up against the complex civil rights statutes that preclude their use (Price, 1997).

Personality/Psychopathology Testing

In 1968, the United States National Advisory Commission on Civil Disorders concluded that there was a need to develop methods to reject police officers if their duties would be affected by their personal prejudices (National Advisory Commission on Civil Disorders, 1968). To determine the fitness of a potential candidate for police work, it was then recommended for law enforcement agencies to use psychologists or psychiatrists to examine applicants and administer batteries of psychological examinations. Developing a technology for locating "personal prejudices" never materialized as a high priority in federal research, and there appeared to be an unproven supposition that any mental health professional would be able to identify such "biased office candidates" from their general training.

Little attention was given to developing valid and specific law enforcement selection tests. Some attempts were made to apply existing psychological instruments (e.g., mental illness tests, personality tests, or intelligence tests) to police selection of "unbiased officers" (Reese, 1987). Several commonly used assessment tools were eventually administered to groups of serving police officers and then retrofitted for use in the employment selection process. This was achieved by creating statistical distributions for law enforcement officers, rather than those used with the general public. But the test items, which were originally developed for use in clinical or hospital settings to identify pathology in patients, remained unchanged and often no "predictive validity" studies (i.e., a means to determine if the new norms were effective in determining future officer misconduct) were conducted. To make matters worse, the test items (statements to which the candidates must respond in some way) were typically reported to be "disturbing" to officer candidates (e.g., "I think that I am going crazy") who complained about such testing as being absurd or demeaning.

There were many critics who did not agree with testing police officer candidates. Kurke and Scrivner (1995) implied that typical assessments focused on personality factors and behaviors that were not specific to, or even relevant to, policing contexts and were of little use. In addition, Cunningham (1986) noted that early testing tended to focus on rare outcomes (e.g., officer mental illness in the future), and seldom found useful or practical principles to guide the test user. Also, Mills and Stratten (1982) found little support for the use of personality tests for police selection in Los Angeles County.

In addition to concerns regarding the content of personality/psychopathology tests, issues with regard to their application also arose. The "Rule Out" model, the predominant application of psychological tests in selection and hiring, attempted to eliminate officers with particular psychological problems or weaknesses. However, this model has been recognized as fatally flawed for several reasons. First, the base rate occurrence of serious mental illness in the general population is low, and is even more infrequent in the screened population of officer candidates. Second, this approach assumes that civil rights violations were the product of the offending officer's mental illness, which was recognized to be inaccurate (Toldson, Davis, & Rostow, 2004). Third, the "Rule Out" model was based on the assumption that a good officer has no mental illness. Although the absence of mental illness may, at best, be a necessary condition of good officer behavior, it is not a sufficient condition for effective performance in a law enforcement role (Davis, Rostow, & Dixon, 2002).

Given the flaws of the "Rule Out" model, a more positive approach called the "Rule In" model was developed. This model focused upon the characteristics or traits that were deemed desirable in law enforcement (e.g., honesty, conscientiousness, etc.) and sought to measure such traits in applicants. Unfortunately, it soon became obvious that a single "best psychological type" of officer did not exist because different roles in the police environment have different job demands. For example, a homicide investigator has different job demands and requires a specific skill set than a patrol officer, a juvenile officer, an undercover narcotics officer, and so forth. In short, each aspect of policing requires a different set of traits or "ideal attitudes and preferences;" therefore, no consensus regarding the ideal officer could ever be reached. As a result of the flaws and failures of these two models, some individuals in the police profession began avoiding the use of psychological testing in officer candidate selection (Scrivner, 1994).

Legal Standards

Historically, alleged deficiencies in police hiring procedures have been commonly used as blame when civil liability claims against agencies and management personnel arise from an incident of claimed police misconduct. These legal claims may be brought under a State Law theory of negligence or by a civil rights claim alleging a deprivation of Constitutional rights. Many, but not all, States recognize a legal claim for negligence in the hiring process. Individuals and agencies are urged to confer with local legal advisors regarding State Law claims in their particular jurisdictions.

Federal civil rights claims arise from an incident which deprived a person of their legal rights under the Constitution or other law (Civil Rights Act, 1871). Claims against a municipality or unit of government require evidence that the Constitutional deprivation was the direct result of

a policy, practice, or custom of the governmental entity (*Monell v. New York City Department of Social Services,* 1978). Furthermore, the policy, practice, or custom must involve deliberate indifference of a policy making official (*Board of the County Commissioners of Bryan County, Oklahoma v. Brown,* 1997). Supervisory or management personnel may be held individually liable in the same manner as a governmental entity (*Doe v. Taylor ISD,* 1994).

Under current law, a claimant in a Federal civil rights claim may impose liability for a hiring decision if the decision involved deliberate indifference to the rights of the public. A requirement of deliberate indifference is that the potential for misconduct must be obvious at the time the hiring decision was made (*Board of the County Commissioners of Bryan County, Oklahoma v. Brown,* 1997; *Gros v. City of Grand Prairie,* 2000). Before deliberate indifference can be found, there must be a close connection between an applicant's background issue and the ultimate act resulting in a Constitutional deprivation (*Barney v. Pulsipher,* 1998). In those States where a negligent hiring claim is recognized, the standard of fault for imposing liability is markedly less than that in a Federal case which requires evidence of deliberate indifference. Mere negligence is insufficient to support a civil rights claim (*Daniel v. Williams,* 1986).

Evolving technology and validation of methods like the M-PULSE Inventory will change the analysis of hiring-based claims as similar developments have done in other areas. Agencies will also face the argument that not using available methods and technologies amounts to negligence or deliberate indifference in the hiring process. Using an affirmative, aggressive approach (e.g., the M-PULSE Inventory) to detect an applicant's propensity to engage in police misconduct will assist in defending agencies and management personnel against claims of deliberate indifference and will also reduce the overall number of incidents giving rise to legal claims.

ADA, EEOC, and Title VII

The M-PULSE was developed to meet legal standards applicable to an employment setting. The Americans with Disabilities Act (ADA) guarantees equal opportunity for individuals with disabilities in employment and other life areas. The ADA prohibits discrimination in all employment practices, including job application procedures, hiring, firing, advancement, compensation, training, and conditions and privileges of employment. It applies to recruitment, advertising, tenure, layoff, leave, fringe benefits, and all other employment-related activities.

The ADA prohibits employment discrimination against applicants and employees who are "qualified individuals with disabilities." The ADA applies to individuals who have impairments that substantially limit major life activities such as seeing, hearing, speaking, walking, breathing, performing manual tasks, learning, caring for oneself, and working. An ADA-qualified individual meets legitimate skill, experience, education, or other requirements of an employment position that he/she holds or seeks, and can perform the "essential functions" of the position with or without reasonable accommodation. Requiring the ability to perform "essential" functions assures that an individual with a disability will not be considered unqualified simply because of the inability to perform marginal or incidental job functions.

An employer may not ask or require a job applicant to take a medical (including psychological) examination, or make any inquiry about the nature or severity of a disability, before a conditional employment offer (Americans with Disabilities Act, 1990). An employer may make a job offer dependant on the satisfactory result of a medical or psychological examination or inquiry, if all entering employees in the same job category are required to do so (called a post-offer examination). If an individual is not hired because a post-offer examination revealed a disability, the reason(s) for not hiring this individual must be job-related and consistent with business necessity, which means that the impairment or disability makes the practical performance of the job unattainable. A post-offer medical or psychological examination may also disqualify an individual from employment if the employer can demonstrate that the individual would pose a direct threat in the workplace (i.e., a significant risk of substantial harm to the health or safety of the individual or others). A post-offer medical examination may not disqualify an individual with a disability who is currently able to perform essential job functions because of a speculation (i.e., a supposition without clear evidence) or a myth that the disability may cause future problems (a supposition without scientific evidence that individuals in a particular disability category cannot perform certain tasks). The ADA may also limit an employer's right to secure common medical information, particularly if it is not job-related.

Sometimes a psychological test, which was designed to reveal mental illness, is used by an employer who claims that the test is used to disclose some non-medical trait (e.g., honesty). The Equal Employment Opportunity Commission (EEOC) states that a test is a medical examination if the test is interpreted by a psychologist or mental health professional, and is routinely used in a clinical setting

to provide evidence that would lead to a diagnosis of a mental disorder or impairment. The use of clinically oriented personality measures that were designed primarily to diagnose psychopathology would probably violate the ADA's prohibition on medical examinations without proof of job-relatedness. Police executives should seek testing that is specific to employment purposes, and supplement such information with other information and test materials that can be linked by research related to future misconduct (*Karraker v. Rent-A-Center, Inc.,* 2005)

Title VII of the Civil Rights Act of 1964 prohibits employment discrimination that is based on race, color, religion, sex, or national origin. Title VII and the ADA cover all private employers, state and local governments, and education institutions that employ 15 or more individuals. These laws also cover private and public employment agencies, labor organizations, and joint labor management committees that control apprenticeship and training. The M-PULSE Inventory has been standardized so as to have negligible impact on applicants who are protected by Title VII, which is an uncommon initial developmental step in personality testing.

In conclusion, the M-PULSE Inventory was created to address issues of liability, supportability, and forensic appropriateness. It was developed specifically for law enforcement selection purposes with items that directly apply to the law enforcement environment. The M-PULSE is the first tool to use precision statistical methods to determine which candidates are the most unlikely to act in destructive or inappropriate ways as an officer, while respecting forensic and civil rights implications of the selection methodology.

M-PULSE™ Inventory Development

The search for behaviors that represented financial, social, and legal liability in the police environment began with a review of claims, litigation, and judgments against law enforcement officers, agencies, and municipalities. This was followed by conducting interviews with chiefs of police, sheriffs, and police executives to outline what they believed to be problematic behaviors among the rank and file of both sworn and non-sworn officers. These considerations lead to the 18 liability categories used in the M-PULSE.

M-PULSE™ Inventory Item Pool

The original item pool for the M-PULSE Inventory consisted of 1,100 items. Five hundred of the initial item pool included statements that reflect police culture (i.e., attitudes, values, and beliefs); these items were based on

the authors' experience with, and in, law enforcement, in addition to sociological literature about police officers. The 600 remaining items in the initial item pool were developed by examining scales from the MMPI-2 and the PAI, and determining which ones were most strongly correlated to each of the 18 liability outcomes that had been identified as critical for police work.[1] Unique items tapping key content and constructs were then put together. After some initial research, further examination, and expert review, a 621-item version was created for initial data collection and analysis. Data was collected on the next 400 officer candidates undergoing post-offer pre-employment screening evaluation at the Matrix Inc. office in Baton Rouge, Louisiana.

The initial data collection was expanded to include several thousand law enforcement candidates, whose job performance was tracked over several years. Several analyses were conducted on these data to identify potentially problematic items. First, various statistical criteria were employed to identify items with poor psychometric features. Along with standard features such as internal consistency, these analyses also examined predictive utility (e.g., relationship to actual job performance liabilities). Second, items were externally reviewed for various legal criteria (e.g., privacy concerns).

Current Version

Analysis of the initial data focused on looking at item intercorrelations, and eliminating redundant items. About half of the items on the current M-PULSE Inventory ask specifically about police work or about police officers, while the other half are general attitudinal items. Items that were deemed to be inconsistent with legal standards in some states for pre-offer usage (ADA, EECO, and Title VII) were eliminated. Results from these analyses identified an additional 166 problematic items, resulting in a final set of 455 M-PULSE Inventory items. A four-choice response set was selected with response choices of "Strongly Agree," "Agree," "Disagree," and "Strongly Disagree." The four-choice response set was chosen to avoid a neutral middle response from respondents, which might be less informative. In contrast, two-choice and six-choice response sets offer too few and too many response options, respectively. Existing administration instructions were refined and then used consistently with the administration of the M-PULSE Inventory.

Development of Scales

This section outlines the development history of the M-PULSE Inventory Validity Scales, Liability Scales, and Empirical Scales.

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[1] It is important to re-iterate here that the test was not designed to be used or interpreted as a medical test.

Validity Scales

Since the M-PULSE Inventory is an objective self-report tool, validity indicators needed to be incorporated in order to assess a respondent's response style. When possible, users of the M-PULSE Inventory are also encouraged to include comprehensive tools in the assessment process, such as the Paulhus Deception Scales (Paulhus, 1998), to assess response style.

The M-PULSE Inventory includes two Validity Scales: Impression Management and Test Attitude. These specific validity metrics are provided because they represent constructs that have been well established in psychological literature. In the early development of the tool, there were four Validity Scales. Test Attitude was a separate scale and remains the same; however, Impression Management was originally broken up into "Virtuosity," "Non-Disclosure," and "Deceit."

Items for each of these scales were created and selected initially on rational grounds. They were then tested by examining the degree to which the scales correlate with other Validity Scales, and by looking at scale reliability. The differences in item content were subtle, and when these original scales were examined in a large sample, the correlations were over .80. Both statistically and in terms of content, it made sense to merge these scales. The result was a scale with broader content coverage for Impression Management. Reliability statistics for the final two Validity Scales (Impression Management and Test Attitude) are presented in chapter 5.

Liability Scales

The primary goal in developing the Liability Scales was to determine item sets that were most highly related to the 18 liability outcomes. As use and research on the M-PULSE Inventory continued, large datasets became available that included M-PULSE Inventory responses and outcome data related to those responses. Regression Analysis and Discriminant Function Analysis were used to find strong relationships between M-PULSE Inventory items and scales and liability outcomes. These procedures produced Liability Scales that correctly predicted actual outcomes between 65.9% and 99.2% of the time with an average classification accuracy of about 86%. Details of these analyses are provided in chapter 5.

Empirical Scales

The Empirical Scales were derived statistically by using factor analytic techniques to all items except the validity items. This procedure uncovers sets of items that share common variance and relate to common themes or a common construct. A full description of the statistical procedure is presented in chapter 5. Four major areas resulted from this analysis: Negative Self-Issues, Negative Perceptions Related to Law Enforcement, Unethical Behavior, and Unpredictability. Examination of the items underlying these factors indicated that they were logical but complex. The items from each area were then subjected to a secondary set of factor analyses that produced three subscales for each of the four main areas. All of the main scales and subscales seemed useful for assessment within policing contexts. The content properties of these scales were investigated by examining the correlations with other scales, as well as through examination of scale reliability (see chapter 5).

California POST Psychological Screening Dimensions

For the California POST scales, the authors and a group of test development experts at MHS selected items from the M-PULSE Inventory that were conceptually similar to the descriptions provided by the California Post Commission (Ones, Viswesvaran, & Dilchert, 2004). During item selection, as many aspects as possible for each area of the ten dimensions were covered. After selecting an initial item set for each area, these items were checked for internal consistency using reliability analysis. Minor adjustments were required. Items with low item-total correlations were dropped. Once these items were dropped, the reliability values indicated high internal consistency (see chapter 5), and the scales were finalized. The scales contained between 8 and 47 items. For more information on the California POST scales, including specific scale descriptions and items, see appendix B.

Norms, Validation, and Ongoing Research

The final stage of development involved collecting additional data on the M-PULSE Inventory from a broader range of data collection sites. Most of the initial work with the M-PULSE Inventory was done in the state of Louisiana. To achieve satisfactory norms, and to prove the inventory could be successfully applied outside of Louisiana, data from other locations and agencies were required. The norms, reliability, and validity of the final 455-item M-PULSE Inventory are described in chapter 5.

5 Norms and Statistical Properties

This chapter presents the normative information and some of the most important research results and statistical properties for the M-PULSE Inventory. Davis and Sitarenios (2005) reported compelling classification accuracy statistics for the M-PULSE Inventory, but cautioned that further research, as well as more data for the liability outcomes, was still required across the United States. Since that time, additional data has been collected to fulfill these requirements. Research with these data showed that approximately 86% (average overall classification accuracy across the 18 Liability areas) of the liability cases could be predicted correctly using M-PULSE Inventory items. The new database includes a normative group consisting of 2,000 candidates from the United States who were administered the M-PULSE Inventory. An additional 3,348 assessments were available. A large proportion of these assessments included long-term follow-up data on the 18 liability factors. This information is presented in greater detail in this chapter, as well as reliability analyses in support of assessment consistency, and factor analysis results to demonstrate how the empirical factors were determined.

Normative Sample

The normative sample consisted of 2,000 officer candidates who were administered the M-PULSE from 2003 to 2007. The standard administration procedure was used (see chapter 2 for details). The average age of these officers was 29.1 (SD = 7.7, age range = 18 to 73 years), and about 70% were between 21 and 33 years of age. In terms of gender, 83.0% of the sample were male. In terms of ethnic background, 53.5% (n = 1,070) of the sample were White/Caucasian, 9.3% (n = 185) were Hispanic, 9.3% (n = 185) were Black/African-American, 16.5% (n = 329) were Asian, 4.1% (n = 82) were multi-racial, and 7.5% (n = 149) were other ethnicities or the ethnicity was not indicated. Data came from multiple sites across the U.S. with all of the major regions represented. In order to ensure that the representation was consistent with U.S. census figures, some weighting of cases was used (see Table 5.1).

Table 5.1. Weighted U.S. Geographic Representation

Region	U.S. Census Representation	M-PULSE Norm Representation Using Weighting
North-East	19.04%	381 (19.05%)
Midwest	22.88%	458 (22.90%)
South	35.62%	712 (35.60%)
West	22.46%	449 (22.45%)

Full Sample

The full sample includes the normative data described above, as well as an additional 3,348 cases that were collected and used for both assessing officers and for research and development of the M-PULSE Inventory. As with the normative sample, the standard administration procedure was also used (see chapter 2 for details). The average age of these officers was 29.9 (SD = 8.5, age range = 16 to 78 years), and about 74% were between 21 and 33 years of age. In terms of gender, 83.7% of the sample were male. In terms of ethnic background, 61.1% (n = 3,268) of the sample were White/Caucasian, 3.9% (n = 206) were Hispanic, 18.5% (n = 987) were Black/African-American, 6.2% (n = 332) were Asian, 1.6% (n = 88) were multi-racial, and 8.9% (n = 477) were other ethnicities or the ethnicity was not indicated. Liability data were available for each of the 18 liability risk factors, with exact numbers shown in Table 5.2. Note that some liability areas occur rarely due to their nature, while others are more common. For the Potential for Resignation and Potential for Termination liabilities, only officers who were no longer active were included. Individuals with no outcome data were also excluded. Most of the liability data information was obtained by the M-PULSE authors from 2003 through 2007.

Table 5.2. Liability Data Available from the Full Dataset (*N* = 3,348)

Liability Area	Liability Did NOT Occur	Liability Did Occur
Interpersonal Difficulties	2,036	120
Chemical Abuse/ Dependency	2,131	25
Off-Duty Misconduct	2,065	91
Procedural and Conduct Mistakes	1,654	506
Property Damage	2,108	50
Misuse of Vehicle	2,104	58
Motor Vehicle Accidents	2,042	113
Discharge of Weapon	2,142	20
Inappropriate Use of Weapon	2,141	17
Unprofessional Conduct	2,044	112
Excessive Force	2,116	40
Racially Offensive Conduct	2,148	13
Sexually Offensive Conduct	2,125	34
Lawsuit Potential	2,152	9
Criminal Conduct	2,129	29
Reprimands/ Suspensions	1,982	175
Potential for Resignation	520	335
Potential for Termination	559	216

Liability Scales: Derivation, Statistical Properties, and Classification Accuracy

One challenge in developing the Liability Scales was that some of the liability outcomes occurred infrequently. Predicting infrequent/rare events is problematic because most officer candidates will not incur future liability, and there is a highly skewed a priori likelihood that any candidate being assessed will not demonstrate liability behaviors later if hired. In this regard, users of the M-PULSE Inventory are cautioned to look for profiles that show pronounced risk, while risk evaluations that are less clear should not raise concern unless other information also suggests the individual to be "at risk."

In order to mitigate the infrequent occurrence of liability outcomes in the database, a two-step approach was used in developing the Liability Scales. Step 1 involved determining which of the 455 items on the M-PULSE Inventory best predicted other liability risk metrics (from a detailed methodology used by the authors [Davis & Rostow, 2002]) across the 18 liability areas. Using this risk metric ensured that a continuous metric was available for this stage of the analysis. Forward stepwise regression analysis was used; in 18 different analyses, the 455 items were the possible independent variables, and each predicted risk metric was used as dependent variables. Items were allowed to enter into the equation as long as they added significantly to the prediction of the risk metric (dependent variable). This analysis produced M-PULSE Inventory item sets that best predicted each risk metric (from this alternate methodology). Table 5.3 shows the significance of the models, multiple R, R^2, and adjusted R^2 for each of the 18 risk areas. For each risk area, the model was highly significant (as indicated by the F and p-values shown), and accounted for a sizable portion (as indicated by the R, R^2, and adjusted R^2 values) of the variance in methodology risk factor scores.

The item models created in the first step were then used in a second series of analyses (step 2). Each of these 18-item models were then used as a predictor in addition to the M-PULSE items to create final models for actual outcomes—the most important aspect of this tool. Eighteen different forward stepwise discriminant function analyses were run. For each analysis, the predictor from step 1 was forced into the model; also allowed into the model were items that added significantly to the correct classification of cases for the outcomes. The result was 18 final models that predicted each outcome with a very high level of prediction accuracy. Classification statistics for each Liability Scale are presented in Tables 5.4 to 5.21.

Table 5.3. Regression Statistics for M-PULSE Inventory Prediction of Methodology Risk Variables

Risk area	F (*df*), p-value	Multiple R	R^2	Adjusted R^2
Interpersonal Difficulties	$F(57, 2893) = 17.7$, $p < .0001$	.51	.26	.24
Chemical Abuse/Dependency	$F(64, 2886) = 17.3$, $p < .0001$	.53	.28	.26
Off-Duty Misconduct	$F(51, 2899) = 23.1$, $p < .0001$	.54	.29	.28
Procedural and Conduct Mistakes	$F(50, 2900) = 21.1$, $p < .0001$	.52	.27	.25
Property Damage	$F(56, 2894) = 26.0$, $p < .0001$	.58	.33	.32
Misuse of Vehicle	$F(72, 2878) = 22.2$, $p < .0001$	.60	.36	.34
Motor Vehicle Accidents	$F(100, 2850) = 32.5$, $p < .0001$	.73	.53	.52
Discharge of Weapon	$F(49, 2901) = 21.2$, $p < .0001$	.51	.26	.25
Inappropriate Use of Weapon	$F(67, 2883) = 19.6$, $p < .0001$	.56	.31	.30
Unprofessional Conduct	$F(78, 2872) = 23.1$, $p < .0001$	.62	.39	.37
Excessive Force	$F(90, 2860) = 20.0$, $p < .0001$	.62	.39	.37
Racially Offensive Conduct	$F(57, 2893) = 20.8$, $p < .0001$	.54	.29	.28
Sexually Offensive Conduct	$F(45, 2905) = 27.9$, $p < .0001$	.55	.30	.29
Lawsuit Potential	$F(54, 2896) = 13.4$, $p < .0001$	.45	.20	.19
Criminal Conduct	$F(64, 2886) = 17.3$, $p < .0001$	.53	.28	.26
Reprimands/Suspensions	$F(63, 2887) = 15.6$, $p < .0001$	.50	.25	.24
Potential for Resignation	$F(48, 2902) = 31.1$, $p < .0001$	.58	.34	.33
Potential for Termination	$F(91, 2859) = 18.8$, $p < .0001$	.61	.37	.35

Table 5.4. Interpersonal Difficulties

Actual Outcome	Predicted Outcome from the M-PULSE Inventory		
	Liability Predicted Not to Occur	Liability Predicted to Occur	Percent Correctly Classified
Liability Did Not Occur	1,738	298	85.4
Liability Occurred	47	73	60.8
Overall Classification Accuracy	84.0%		

Table 5.5. Chemical Abuse/Dependency

Actual Outcome	Predicted Outcome from the M-PULSE Inventory		
	Liability Predicted Not to Occur	Liability Predicted to Occur	Percent Correctly Classified
Liability Did Not Occur	2,042	89	95.8
Liability Occurred	4	21	84.0
Overall Classification Accuracy	95.7%		

Table 5.6. Off-Duty Misconduct

Actual Outcome	Predicted Outcome from the M-PULSE Inventory		
	Liability Predicted Not to Occur	Liability Predicted to Occur	Percent Correctly Classified
Liability Did Not Occur	1,786	279	86.5
Liability Occurred	32	59	64.8
Overall Classification Accuracy	85.6%		

Table 5.7. Procedural and Conduct Mistakes

Actual Outcome	Predicted Outcome from the M-PULSE Inventory		
	Liability Predicted Not to Occur	Liability Predicted to Occur	Percent Correctly Classified
Liability Did Not Occur	1,087	567	65.7
Liability Occurred	169	337	66.6
Overall Classification Accuracy	65.9%		

Table 5.8. Property Damage

Actual Outcome	Predicted Outcome from the M-PULSE Inventory		
	Liability Predicted Not to Occur	Liability Predicted to Occur	Percent Correctly Classified
Liability Did Not Occur	1,777	331	84.3
Liability Occurred	11	39	78.0
Overall Classification Accuracy	84.2%		

Table 5.9. Misuse of Vehicle

Actual Outcome	Predicted Outcome from the M-PULSE Inventory		
	Liability Predicted Not to Occur	Liability Predicted to Occur	Percent Correctly Classified
Liability Did Not Occur	1,827	277	86.8
Liability Occurred	11	47	81.0
Overall Classification Accuracy	86.7%		

Table 5.10. Motor Vehicle Accidents

Actual Outcome	Predicted Outcome from the M-PULSE Inventory		
	Liability Predicted Not to Occur	Liability Predicted to Occur	Percent Correctly Classified
Liability Did Not Occur	1,645	397	80.6
Liability Occurred	33	80	70.8
Overall Classification Accuracy	80.0%		

Table 5.11. Discharge of Weapon

Actual Outcome	Predicted Outcome from the M-PULSE Inventory		
	Liability Predicted Not to Occur	Liability Predicted to Occur	Percent Correctly Classified
Liability Did Not Occur	2,055	87	95.9
Liability Occurred	6	14	70.0
Overall Classification Accuracy	95.7%		

Table 5.12. Inappropriate Use of Weapon

Actual Outcome	Predicted Outcome from the M-PULSE Inventory		
	Liability Predicted Not to Occur	Liability Predicted to Occur	Percent Correctly Classified
Liability Did Not Occur	2,097	44	97.9
Liability Occurred	1	16	94.1
Overall Classification Accuracy	97.9%		

Table 5.13. Unprofessional Conduct

Actual Outcome	Predicted Outcome from the M-PULSE Inventory		
	Liability Predicted Not to Occur	Liability Predicted to Occur	Percent Correctly Classified
Liability Did Not Occur	1,676	368	82.0
Liability Occurred	32	80	71.4
Overall Classification Accuracy	81.4%		

Table 5.14. Excessive Force

Actual Outcome	Predicted Outcome from the M-PULSE Inventory		
	Liability Predicted Not to Occur	Liability Predicted to Occur	Percent Correctly Classified
Liability Did Not Occur	1,941	175	91.7
Liability Occurred	9	31	77.5
Overall Classification Accuracy	91.5%		

Table 5.15. Racially Offensive Conduct

Actual Outcome	Predicted Outcome from the M-PULSE Inventory		
	Liability Predicted Not to Occur	Liability Predicted to Occur	Percent Correctly Classified
Liability Did Not Occur	2,130	18	99.2
Liability Occurred	0	13	100.0
Overall Classification Accuracy	99.2%		

Table 5.16. Sexually Offensive Conduct

Actual Outcome	Predicted Outcome from the M-PULSE Inventory		
	Liability Predicted Not to Occur	Liability Predicted to Occur	Percent Correctly Classified
Liability Did Not Occur	1,947	178	91.6
Liability Occurred	11	23	67.6
Overall Classification Accuracy	91.2%		

Table 5.17. Lawsuit Potential

Actual Outcome	Predicted Outcome from the M-PULSE Inventory		
	Liability Predicted Not to Occur	Liability Predicted to Occur	Percent Correctly Classified
Liability Did Not Occur	2,108	44	98.0
Liability Occurred	1	8	88.9
Overall Classification Accuracy	97.9%		

Table 5.18. Criminal Conduct

Actual Outcome	Predicted Outcome from the M-PULSE Inventory		
	Liability Predicted Not to Occur	Liability Predicted to Occur	Percent Correctly Classified
Liability Did Not Occur	1,988	141	93.4
Liability Occurred	7	22	75.9
Overall Classification Accuracy	93.1%		

Table 5.19. Reprimands/Suspensions

Actual Outcome	Predicted Outcome from the M-PULSE Inventory		
	Liability Predicted Not to Occur	Liability Predicted to Occur	Percent Correctly Classified
Liability Did Not Occur	1,461	521	73.7
Liability Occurred	51	124	70.9
Overall Classification Accuracy	73.5%		

Table 5.20. Potential for Resignation

Actual Outcome	Predicted Outcome from the M-PULSE Inventory		
	Liability Predicted Not to Occur	Liability Predicted to Occur	Percent Correctly Classified
Liability Did Not Occur	373	147	71.7
Liability Occurred	90	245	73.1
Overall Classification Accuracy	72.3%		

Table 5.21. Potential for Termination

Actual Outcome	Predicted Outcome from the M-PULSE Inventory		
	Liability Predicted Not to Occur	Liability Predicted to Occur	Percent Correctly Classified
Liability Did Not Occur	424	135	75.8
Liability Occurred	57	159	73.6
Overall Classification Accuracy	75.2%		

In summary, the first step of the analysis ensured that the Liability Scale was rooted against a metric that provides a continuous metric as an indicator of risk. The second step of the analysis provides direct ties to dichotomous risk outcomes. The end result is 18 Liability Scales that are highly effective in classifying cases for each of the 18 liability dimensions.

Scale Reliability

This section provides reliability statistics for the M-PULSE Inventory scales in terms of Cronbach's alpha. Cronbach's alpha provides a metric for assessing the extent to which items from the same scale are consistently measuring the same construct. Desirable values of Cronbach's alpha vary depending on the number of items on the scale, the construct being measured, and the context that the measure is being used in. Generally speaking, Cronbach's alpha values above .80 indicate excellent reliability, values between .70 to .80 are very good, and values between .60 to .70 are satisfactory/good. The values shown in Tables 5.22 to 5.24 are based on the full sample[1] and indicate strong reliability for the Validity Scales, the Empirical Scales, and the POST scales. For the Validity Scales, the alpha value for Impression Management is .75, and the alpha value for the Test Attitude scale is .66. Both of these values indicate adequate reliability. For the Empirical Scales, the alpha values range from .67 to .97, indicating strong reliability. Finally, for the POST[2] scales, the alpha values range from .64 to .93, also indicating strong reliability. Note that it is not appropriate to compute Cronbach's alpha for the Liability Scales since these metrics include actual scales and are not just item based. The key psychometric properties for the Liability Scales are presented in the section entitled *Liability Scales: Derivation, Statistical Properties, and Classification Accuracy*.

Table 5.22. Reliability of the Validity Scales Using Cronbach's Alpha

Scale	Cronbach's Alpha
Impression Management	.75
Test Attitude	.66

Table 5.23. Reliability of the Empirical Scales Using Cronbach's Alpha

Scale	Cronbach's Alpha
Negative Self-Issues	.97
Negative Emotions	.94
Egocentricism	.95
Inadequate Views of Police Work	.91
Poor Emotional Controls	.72
Negative Perceptions Related to Law Enforcement	.93
Inappropriate Attitudes about the Use of Force	.88
Overly Traditional Officer Traits	.79
Suspiciousness	.88
Unethical Behavior	.90
Lack of Personal Integrity	.84
Negative Views of Department/ Leadership	.81
Amorality	.72
Unpredictability	.82
Risk Taking	.76
Novelty Seeking	.67

Table 5.24. Reliability of the POST Scales Using Cronbach's Alpha

Scale	Cronbach's Alpha
Social Incompetence	.88
Lack of Teamwork	.87
Unreliability	.87
Reckless-Impulsivity	.81
Rigidity	.92
Lack of Integrity/Ethics	.91
Emotional Instability–Stress Intolerance	.93
Poor Decision-Making and Judgment	.74
Passivity–Submissiveness	.84
Substance Abuse	.64

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[1]   Similar analyses were conducted for the normative sample only and produced virtually identical results.

[2]   See appendix B for more information on the California POST dimensions.

Factorial Validity: Empirical Factors

The Empirical Scales were determined through the use of factor analysis on the full data sample. Maximum likelihood factor analysis was used with Varimax orthogonal rotation. The number of factors for the factor solution was determined by examining the scree plot, eigenvalues greater than one, and factor interpretability. Based on these criteria, a five-factor solution was determined to be the most suitable, but a four-factor solution was the end result. This section describes this eventual emergence based on factor analysis.

All 455 items were initially included in the procedure. However, items that did not load at .30 or higher on any of the factors were dropped and the analysis was rerun. This procedure was repeated until all items loaded at .30 or higher. The first factor accounted for 9.1% of the variance, the second factor 4.5% of the variance, the third factor 3.3% of the variance, the fourth factor 2.3% of the variance, and the fifth factor 2.0% of the variance. Because each of these five main factors included a large number of items, the items from each factor were subjected separately to the same factor analysis procedure. This was done to determine if meaningful subscales could be derived to enhance the utility of the Empirical Scales. The first factor was labeled "Negative Self-Issues" reflecting the item content (the top loading items for each main factor and subscale are shown in appendix A), and the subscales were labeled "Negative Emotions," "Egocentricism," and "Inadequate Views of Police Work." The second factor was labeled "Negative Perceptions Related to Law Enforcement." Its subscales were labeled "Inappropriate Attitudes about the Use of Force," "Overly Traditional Officer Traits," and "Suspiciousness." The third factor included two subscales. One subscale consisted mainly of the Impression Management validity items, and the other subscale had to do with emotional control. Since the Impression Management scale already existed, this subscale is not repeated on the empirical factors. The "Emotional Control" component, however, was retained and was grouped, on conceptual grounds, under the Negative Self-Issues main factor, resulting in four main empirical factors. The fourth main factor, was labeled "Unethical Behavior" and includes subscales labeled "Lack of Personal Integrity," "Negative Views of Department/Leadership," and "Amorality." Finally, the fifth main factor pertains to "Unpredictability" and includes two subscales labeled "Risk Taking" and "Novelty Seeking."

T-scores

For easy interpretation, most of the results from the M-PULSE Inventory are presented as *T*-scores.[3] With

T-scores, all of the scales have the average or mean score of 50. Standard deviations are used to measure how far from the average individual candidates fall. One standard deviation equals 10 points. The majority of candidates (approximately 68%) will receive scores within 10 points of the average (i.e., between 40 and 60). Scores within this range are generally considered about average or typical of most officer candidates. Scores below this middle range (i.e., below 40) are good and are associated with more desirable attitudes, behaviors, or predispositions related to law enforcement work. Scores above this range (i.e., above 60), however, are associated with less desirable attitudes, behaviors, or predispositions. Table 5.25 provides interpretive guidelines for various *T*-score ranges; however, the M-PULSE Inventory is not limited to these ranges. High scores are indicative of poor results on the M-PULSE Inventory assessment, indicating that the candidate is a less desirable fit in the law enforcement profession.

Table 5.25. Interpretive Guidelines for the M-PULSE Inventory Scale Scores

Standard Score	Interpretive Guideline
70 or more	Very Problematic Score Range for Law Enforcement Work
60–69	Problematic Score Range for Law Enforcement Work
40–59	Non-Problematic Score Range for Law Enforcement Work
30–39	Desirable Score Range for Law Enforcement Work
29 or less	Very Desirable Score Range for Law Enforcement Work

Readability of the M-PULSE Inventory

Readability is an important consideration, particularly for screening tools like the M-PULSE Inventory. Ensuring that the vocabulary can be easily understood by the individuals being assessed greatly improves the validity and interpretability of the test results. The most commonly used formula for assessing readability is the Dale-Chall formula (Harrison, 1980). The Dale-Chall formula (Chall & Dale, 1995; Dale & Chall, 1948) is based on an evaluation of both the individual words (semantic difficulty) and the difficulty of the sentence structure (syntactic difficulty).

In evaluating the readability of the M-PULSE Inventory items, both word length and sentence length were considered. The number of complete sentences was counted and divided into the number of words to determine average sentence length (WDS/SEN). Next, the number of "unfamiliar" words (UFMWDS) was counted. A word is considered unfamiliar if it does not appear on a list of 3,000 "familiar" words compiled by Edgar Dale (revised in 1983). "Familiar" words are known by 80% of children

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[3]   The Liability Scales are kept as raw scores and subdivided into "risk" categories for ease of use.

in the fourth grade. Consideration of the amount of familiar and unfamiliar words in the assessment increases the accuracy of the reading level assessment. The grade reading level was determined using the following formula:

$$\text{Grade} = (0.1579 \times \text{PERCENT UFMWDS}) + (0.0496 \times \text{WDS/SEN}) + 3.6365$$

Use of the Dale-Chall procedure for the M-PULSE Inventory produced a North American sixth grade reading level.

Gender and Ethnicity Analyses

To assess test bias, gender and ethnicity analyses were conducted for the M-PULSE Inventory scores (Liability, Empirical, and POST) using the normative sample. Specifically, percentages and mean scores were compared for scores between males and females and across White/Caucasian, Black/African American, Hispanic, and Asian cases. For all ethnic analyses, Black/African Americans, Hispanics, and Asians were compared to White/Caucasians.

When comparing percentages, test bias may be indicated if one group generates a favorable score on a scale less than 80% as often as another group. This criterion is taken directly from the legal criteria for "adverse impact." Using this criterion, the percentage of cases in the "no risk" range (i.e., scale scores < 60) was compared across demographic groups. When evaluating means, group differences of greater than .5 standard deviations were considered meaningful. This criterion is roughly equivalent to a moderate effect size. In mean score analyses, effect sizes are emphasized over statistical significance, given the extremely large sample size.

Gender Analyses

Tables 5.26 and 5.27 illustrate the gender differences in percentages and means (respectively) for the M-PULSE Liability Scales. These tables demonstrate that there was no adverse impact of gender on the Liability Scales. For example, the female "no risk" percentage for the Criminal Conduct scale was not lower than 68.7% (i.e., 80% of the male percentage of 85.9%). Similar analyses for

Table 5.26. Liability Scales: Percentage of Males and Females Scoring in the "No Risk" Range

Liability Scale	% Males below 60	% Females below 60	80% Criterion	Adverse Impact Indicated?
Interpersonal Difficulties	87.4	83.6	69.9	No
Chemical Abuse/Dependency	83.9	86.5	67.1	No
Off-Duty Misconduct	85.5	88.8	68.4	No
Procedural and Conduct Mistakes	85.0	85.5	68.0	No
Property Damage	86.1	86.7	68.9	No
Misuse of Vehicle	84.2	90.3	67.6	No
Motor Vehicle Accidents	83.5	92.2	66.8	No
Discharge of Weapon	85.8	85.8	68.6	No
Inappropriate Use of Weapon	86.1	87.3	68.9	No
Unprofessional Conduct	84.0	90.9	67.2	No
Excessive Force	84.6	89.8	67.7	No
Racially Offensive Conduct	85.2	87.1	68.2	No
Sexually Offensive Conduct	84.5	89.9	67.6	No
Lawsuit Potential	87.8	81.1	70.2	No
Criminal Conduct	85.9	85.6	68.7	No
Reprimands/Suspensions	83.8	87.0	67.0	No
Potential for Resignation	84.4	87.6	67.5	No
Potential for Termination	85.6	83.6	68.5	No

Table 5.27. Liability Scales: Mean Scores of Males and Females

Liability Scale	Males	Females	Standard Deviation	Absolute Difference > .5?
Interpersonal Difficulties	-1.54	-1.30	1.45	No
Chemical Abuse/Dependency	-5.56	-5.84	3.32	No
Off-Duty Misconduct	-1.91	-1.98	1.78	No
Procedural and Conduct Mistakes	-0.07	-0.14	0.83	No
Property Damage	-1.45	-1.87	2.13	No
Misuse of Vehicle	-2.09	-2.55	2.38	No
Motor Vehicle Accidents	-1.02	-1.59	1.47	No
Discharge of Weapon	-6.61	-6.57	3.72	No
Inappropriate Use of Weapon	-7.73	-8.17	4.06	No
Unprofessional Conduct	-1.18	-1.62	1.58	No
Excessive Force	-3.64	-4.41	2.99	No
Racially Offensive Conduct	-12.48	-12.75	5.47	No
Sexually Offensive Conduct	-3.61	-4.15	2.80	No
Lawsuit Potential	-9.00	-8.70	4.32	No
Criminal Conduct	-4.61	-4.80	3.07	No
Reprimands/Suspensions	-0.27	-0.53	1.37	No
Potential for Resignation	0.16	0.02	1.65	No
Potential for Termination	-0.39	-0.16	1.84	No

the Empirical and POST scales are summarized in Tables 5.28 and 5.29, respectively. Again, there were no gender differences in either the percentages (Table 5.28) or mean scores (Table 5.29) for any of these scales.

Ethnicity Analyses

Tables 5.30 and 5.31 summarize the ethnicity analyses for percentages and means (respectively) for the M-PULSE Inventory Liability Scales. Based on these results, none of the Liability Scale scores for Black/African American, Hispanic, or Asian cases differed from White/Caucasian cases. Similar analyses for the Empirical and POST scales are illustrated in Tables 5.32 and 5.33, respectively. The comparison of percentage scores yielded no significant ethnicity effects. In comparing means however, two Empirical Scales demonstrated ethnic differences. Compared

to White/Caucasians, mean scores for the Negative Perceptions Related to Law Enforcement scale were lower for Black/African Americans and Asians, and mean scores for the Overly Traditional Officer Traits scale were lower for Black/African Americans. There were no ethnic differences for any of the POST scales.

To summarize, the Liability and POST scales showed no meaningful gender or ethnic differences, and there were no gender differences in any of the Empirical Scales. Two of the Empirical Scales—Negative Perceptions Related to Law Enforcement and Overly Traditional Officer Traits—demonstrated ethnic effects. However, these differences were indicated on only one of the two statistical criteria employed. Overall, these results suggest that the effects of gender or ethnicity on M-PULSE scores are negligible.

Table 5.28. Empirical and POST Scales: Percentage of Males and Females Scoring in the "No Risk" Range

Scale	% Males below 60	% Females below 60	80% Criterion	Adverse Impact Indicated?
Empirical Scales				
Negative Self-Issues	80.3	85.5	64.2	No
Negative Emotions	79.7	83.6	63.8	No
Egocentricism	80.3	80.7	64.2	No
Inadequate Views of Police Work	83.8	77.9	67.0	No
Poor Emotional Controls	85.0	85.8	68.0	No
Negative Perceptions Related to Law Enforcement	85.7	85.4	68.6	No
Inappropriate Attitudes about the Use of Force	85.5	85.2	68.4	No
Overly Traditional Officer Traits	87.0	86.1	69.6	No
Suspiciousness	83.3	83.0	66.6	No
Unethical Behavior	86.5	86.6	69.2	No
Lack of Personal Integrity	87.6	85.5	70.1	No
Negative Views of Department/Leadership	88.3	91.9	70.6	No
Amorality	85.6	81.8	68.5	No
Unpredictability	88.7	73.8	71.0	No
Risk Taking	86.7	77.7	69.4	No
Novelty Seeking	85.1	79.0	68.1	No
POST Scales				
Social Incompetence	87.4	87.8	69.9	No
Lack of Teamwork	87.8	89.7	70.2	No
Unreliability	88.2	88.8	70.6	No
Reckless-Impulsivity	84.9	89.8	67.9	No
Rigidity	87.4	90.3	69.9	No
Lack of Integrity/Ethics	86.9	90.7	69.5	No
Emotional Instability–Stress Intolerance	88.2	81.3	70.6	No
Poor Decision-Making and Judgment	83.8	81.0	67.0	No
Passivity–Submissiveness	89.7	83.4	71.8	No
Substance Abuse	82.9	83.6	66.3	No

Table 5.29. Empirical and POST Scales: Mean Scores of Males and Females

Scale	Males	Females	Standard Deviation	Absolute Difference > .5 *SD*?
Empirical Scales				
Negative Self-Issues	445.85	440.21	34.43	No
Negative Emotions	120.39	118.27	11.76	No
Egocentricism	173.27	173.06	15.06	No
Inadequate Views of Police Work	58.80	60.86	9.67	No
Poor Emotional Controls	27.62	27.51	3.78	No
Negative Perceptions Related to Law Enforcement	182.50	182.64	18.87	No
Inappropriate Attitudes about the Use of Force	73.86	74.02	7.85	No
Overly Traditional Officer Traits	41.54	42.20	5.61	No
Suspiciousness	56.64	56.17	8.08	No
Unethical Behavior	104.33	105.62	10.94	No
Lack of Personal Integrity	35.37	35.70	4.98	No
Negative Views of Department/Leadership	32.51	32.37	3.67	No
Amorality	36.43	37.47	3.98	No
Unpredictability	43.61	46.30	6.29	No
Risk Taking	13.72	14.21	2.60	No
Novelty Seeking	16.17	16.61	2.55	No
POST Scales				
Social Incompetence	65.43	65.84	8.74	No
Lack of Teamwork	62.24	62.15	8.04	No
Unreliability	54.16	53.98	7.83	No
Reckless-Impulsivity	61.61	60.41	7.40	No
Rigidity	95.43	94.83	12.78	No
Lack of Integrity/Ethics	97.15	96.10	13.01	No
Emotional Instability–Stress Intolerance	77.93	79.82	13.19	No
Poor Decision-Making and Judgment	20.19	20.74	3.45	No
Passivity–Submissiveness	29.59	30.75	5.32	No
Substance Abuse	16.60	16.42	3.22	No

Table 5.30. Liability Scales: Percentage of Ethnic Groups Scoring in the "No Risk" Range

Liability Scale	White	Black	Hispanic	Asian	80% Criterion	Adverse Impact Indicated?
Interpersonal Difficulties	85.1	84.6	90.7	86.8	68.1	No
Chemical Abuse/Dependency	83.5	87.1	84.8	86.0	66.8	No
Off-Duty Misconduct	84.9	82.6	89.9	85.4	67.9	No
Procedural and Conduct Mistakes	83.9	87.7	86.2	87.5	67.1	No
Property Damage	85.7	84.8	87.3	87.3	68.6	No
Misuse of Vehicle	85.3	87.2	81.2	87.5	68.2	No
Motor Vehicle Accidents	82.6	85.9	84.3	88.4	66.1	No
Discharge of Weapon	86.0	85.0	86.7	86.8	68.8	No
Inappropriate Use of Weapon	85.1	86.6	87.8	90.0	68.1	No
Unprofessional Conduct	83.1	81.8	88.3	91.0	66.5	No
Excessive Force	86.9	77.8	84.1	85.9	69.5	No
Racially Offensive Conduct	86.5	87.6	85.5	85.0	69.2	No
Sexually Offensive Conduct	86.6	77.5	89.0	85.2	69.3	No
Lawsuit Potential	85.0	82.2	87.3	87.4	68.0	No
Criminal Conduct	86.3	83.4	83.6	82.8	69.0	No
Reprimands/Suspensions	84.1	89.4	83.8	86.4	67.3	No
Potential for Resignation	82.0	86.2	89.3	92.0	65.6	No
Potential for Termination	83.7	85.0	89.7	89.5	67.0	No

Table 5.31. Liability Scales: Mean Scores of Ethnic Groups

Liability Scale	White	Black	Hispanic	Asian	Standard Deviation	Absolute Difference > .5 *SD*?
Interpersonal Difficulties	-1.38	-1.26	-1.59	-1.68	1.47	No
Chemical Abuse/Dependency	-5.33	-6.01	-5.64	-6.15	3.26	No
Off-Duty Misconduct	-1.78	-1.80	-2.22	-2.04	1.78	No
Procedural and Conduct Mistakes	-0.01	-0.30	-0.08	-0.22	0.84	No
Property Damage	-1.42	-1.77	-1.63	-1.78	2.12	No
Misuse of Vehicle	-2.13	-2.42	-1.64	-2.48	2.39	No
Motor Vehicle Accidents	-0.98	-1.25	-1.08	-1.40	1.47	No
Discharge of Weapon	-6.45	-6.56	-6.63	-6.95	3.69	No
Inappropriate Use of Weapon	-7.70	-7.87	-7.80	-8.18	3.98	No
Unprofessional Conduct	-1.10	-1.14	-1.31	-1.63	1.57	No
Excessive Force	-3.71	-3.39	-3.16	-4.26	3.00	No
Racially Offensive Conduct	-12.50	-13.08	-12.18	-12.44	5.46	No
Sexually Offensive Conduct	-3.72	-3.21	-3.56	-3.74	2.79	No
Lawsuit Potential	-8.76	-8.30	-8.77	-9.24	4.38	No
Criminal Conduct	-4.67	-3.87	-4.29	-4.65	3.10	No
Reprimands/Suspensions	-0.23	-0.55	-0.35	-0.50	1.35	No
Potential for Resignation	0.38	-0.17	0.03	-0.37	1.63	No
Potential for Termination	-0.09	-0.46	-0.71	-0.83	1.82	No

Table 5.32. Empirical and POST Scales: Percentage of Ethnic Groups Scoring in the "No Risk" Range

Scale	White	Black	Hispanic	Asian	80% Criterion	Adverse Impact Indicated?
Empirical Scales						
Negative Self-Issues	81.6	78.8	83.9	83.6	65.3	No
Negative Emotions	80.0	79.3	79.8	84.1	64.0	No
Egocentricism	79.4	82.9	81.5	84.6	63.5	No
Inadequate Views of Police Work	81.5	82.5	86.3	84.7	65.2	No
Poor Emotional Controls	83.2	85.4	84.3	90.2	66.6	No
Negative Perceptions Related to Law Enforcement	83.5	92.3	87.2	91.6	66.8	No
Inappropriate Attitudes about the Use of Force	83.1	91.3	87.8	91.0	66.5	No
Overly Traditional Officer Traits	85.8	92.9	89.2	90.0	68.6	No
Suspiciousness	81.4	88.6	81.1	90.9	65.1	No
Unethical Behavior	87.2	85.0	83.6	89.1	69.8	No
Lack of Personal Integrity	87.6	86.5	84.3	91.1	70.1	No
Negative Views of Department/ Leadership	90.0	88.6	88.0	89.0	72.0	No
Amorality	88.1	79.6	83.7	82.5	70.5	No
Unpredictability	87.7	80.5	88.6	84.7	70.2	No
Risk Taking	85.9	74.6	86.5	86.6	68.7	No
Novelty Seeking	86.4	82.2	82.7	82.0	69.1	No
POST Scales						
Social Incompetence	88.5	88.5	90.2	80.1	70.8	No
Lack of Teamwork	89.0	86.3	89.7	83.2	71.2	No
Unreliability	89.7	88.5	91.3	81.2	71.8	No
Reckless-Impulsivity	87.0	88.6	83.6	82.5	69.6	No
Rigidity	88.7	87.7	90.2	81.7	71.0	No
Lack of Integrity/Ethics	90.9	84.4	86.2	78.3	72.7	No
Emotional Instability–Stress Intolerance	88.3	91.3	91.8	79.8	70.6	No
Poor Decision-Making and Judgment	85.2	90.2	84.9	75.3	68.2	No
Passivity–Submissiveness	90.4	96.2	91.3	79.6	72.3	No
Substance Abuse	86.1	93.0	87.0	74.4	68.9	No

Table 5.33. Empirical and POST Scales: Mean Scores of Ethnic Groups

Scale	White	Black	Hispanic	Asian	Standard Deviation	Absolute Difference > .5 *SD*?
Empirical Scales						
Negative Self-Issues	444.76	445.53	445.72	441.37	34.34	No
Negative Emotions	120.10	121.16	120.78	117.91	11.65	No
Egocentricism	173.78	172.11	172.99	170.78	15.09	No
Inadequate Views of Police Work	59.67	58.76	58.71	58.59	9.65	No
Poor Emotional Controls	27.87	28.00	28.21	26.46	3.74	No
Negative Perceptions Related to Law Enforcement	185.28	175.61	180.89	175.81	18.86	Yes: Black, Asian
Inappropriate Attitudes about the Use of Force	74.86	72.33	72.69	71.62	7.86	No
Overly Traditional Officer Traits	42.36	39.21	40.49	40.51	5.54	Yes: Black
Suspiciousness	57.48	54.10	57.29	53.55	8.09	No
Unethical Behavior	103.66	105.85	106.69	103.83	10.81	No
Lack of Personal Integrity	35.55	35.69	36.32	34.18	4.87	No
Negative Views of Department/ Leadership	32.16	32.28	32.92	32.39	3.72	No
Amorality	35.96	37.92	37.33	37.21	3.94	No
Unpredictability	44.06	44.79	43.13	44.55	6.16	No
Risk Taking	13.76	14.59	13.59	13.75	2.55	No
Novelty Seeking	16.20	16.31	16.21	16.54	2.46	No
POST Scales						
Social Incompetence	65.25	66.05	64.60	67.56	8.67	No
Lack of Teamwork	62.15	62.63	61.83	63.35	8.01	No
Unreliability	53.90	54.13	53.68	56.00	7.80	No
Reckless-Impulsivity	61.20	60.66	61.60	62.31	7.32	No
Rigidity	95.18	94.59	94.17	98.19	12.67	No
Lack of Integrity/Ethics	95.74	97.40	96.98	101.06	12.95	No
Emotional Instability–Stress Intolerance	78.05	77.57	76.15	81.15	13.07	No
Poor Decision-Making and Judgment	20.14	19.88	20.03	21.23	3.40	No
Passivity–Submissiveness	29.64	28.16	29.04	31.25	5.29	No
Substance Abuse	16.24	15.65	16.61	17.36	3.19	No

6 Concluding Comments and Directions for Future Research

The M-PULSE Inventory provides agencies, risk managers, and psychologists valuable information regarding the attitudes, values, beliefs, and behaviors of potential law enforcement officers. This information is critical in sorting and/or hiring suitable individuals for law enforcement personnel. The M-PULSE Inventory also provides accurate information regarding potential liability issues, which pose significant costs to police departments in both monetary and reputational terms. Though designed for selection purposes, the M-PULSE Inventory has applications to incumbent officers and fitness-for-duty evaluations as well. The M-PULSE Inventory provides post-offer value in that it may aid psychologists in predicting more specific and detailed liabilities.

The information in this manual details key statistical analyses of the M-PULSE Inventory, including reliability, factorial validity, and gender/ethnic analyses. Classification accuracy results suggest that the M-PULSE Inventory is a strong predictor of actual liability outcomes. Several avenues of future research exist for this scale. For example, given the pronounced significance of liability issues, researchers may wish to perform even further analyses of classification accuracy over long periods of law enforcement service. Normative analyses did not generate any significant gender or ethnicity differences on the M-PULSE, though future analyses focusing on females and various ethnic groups (e.g., Black, Hispanic, Asian, Aboriginal) would be beneficial.

Alternative scales are currently in development that will provide similar liability prediction for applicants in other important areas of public service, including fire departments, correctional officers, and private security officers. The importance of identifying potentially liable applicants is no less imperative in these fields. Like the M-PULSE, it is anticipated that these scales will have a significant positive impact on public safety.

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Appendix A
Empirical Scale Loadings

This appendix shows each of the Empirical Scales, provides a definition for the scale, and lists the 10 highest loaded items from that scale.

1. Negative Self-Issues:
Negative self-views that affect emotions, actions, and/or attitudes.

431. I find that I cannot pay attention to what I am doing when I am working.
391. I am somewhat bitter about life.
285. I'm not a very happy person.
437. My family treats me like I'm a child.
286. I don't have much confidence in my abilities.
319. People have said that I need counseling.
222. Staying focused on a project or task is difficult for me.
210. Others see me as absent-minded.
308. I pout and sulk.
367. In general, I am a happy person.

1a. Negative Emotions:
Poor mood, unhappiness, lacking confidence, and shyness.

76. I am shy.
197. I'm a bashful person.
218. I worry a lot.
27. I am a very confident person.
432. It makes me nervous when people stare at me.
392. I am afraid to give a talk to a group.
159. I worry about job stress getting to me.
158. Other people seem happier than I am.
79. I feel lonely.
69. I am often sad.

1b. Egocentricism:
May think he/she is above the rules, may be seen as arrogant, or a "show-off."

290. I like to shock others.
395. People think I am arrogant.
394. I cannot stop thinking about money.
431. I find that I cannot pay attention to what I am doing when I am working.
263. I don't like to leave my home.

416. As a kid, I enjoyed breaking the rules at school.
391. I am somewhat bitter about life.
196. I seem to get the short end of the stick.
212. As a kid, I would sneak into events (like fairs or amusement parks) without paying.
257. I think that helping others causes too many problems.

1c. Inadequate Views of Police work:
May lack high level motivation to become a good officer, and views of policing may not be adequate.

249. Law enforcement is very important.
312. The more I know about what I'm doing, the better the job I do.
99. It is important to have the right number of officers at an emergency call.
338. A good officer can learn from people in all walks of life.
131. Coming to the aid of a fellow officer is part of being a cop.
369. The public wants results in the form of arrests and decreasing crime, not excuses.
455. I have answered the test items as honestly as possible.
447. I would be proud to wear an officer's uniform.
376. Life is worth living.
163. Solving a crime requires more than just taking statements from witnesses.

1d. Poor Emotional Controls:
Prone to temper outbursts, poor behavioral controls, and hard-headedness.

384. I have lost my temper.
201. I have a temper.
105. I cheated on tests in school.
259. I have stolen things that I didn't need.
400. I am hard-headed.
240. Even a skilled and capable officer could lose his or her temper with family members.
199. I cut school as a kid.
5. Many people say I am moody.
81. I can be cruel.
326. I hate to be bothered when I am working on something that requires concentration.

2. Negative Perceptions Related to Law Enforcement:

Undesirable attitudes toward use of force, overly traditional views of police work, suspiciousness.

374. I think everyone has a hidden reason for being agreeable to others.

101. Most people would use deception to get what they want.

127. Many people have sneaky plans to gain an advantage over others.

370. An officer's character can be seen in his or her lack of fear in the face of danger.

411. Regulations are how people in power keep control of the rest of us.

272. An experienced officer can tell if a suspect is likely to be guilty by his or her resistance to verbal commands.

407. Offenders will accuse the arresting officer of some misconduct, whether it is true or not.

299. Criminals hide behind foreign accents in order to pretend they don't understand a question.

381. Everyone seems to want the rights, but not the responsibilities.

332. Certain music is known to be associated with criminal conduct.

2a. Inappropriate Attitudes about the Use of Force:

Strong attitudes that condone the use of force in policing situations.

270. The rough treatment that officers show to some offenders is an important deterrent to crime.

349. A good officer can correctly guess the crime by the way a suspect looks.

393. An arrest in which a suspect is injured may do more to prevent crime than the long trial that follows.

339. Police authority is based on physical superiority.

250. Suspects who complain about being "roughed up" by the police usually deserved it.

360. Criminals can be identified by their appearance.

66. Suspects expect to be roughed up a little during an arrest.

225. Some offenders are happy only when officers are tough with them.

315. An officer might "rough up" a criminal to let him or her know that he or she cannot get away with being disrespectful.

309. Danger is what makes law enforcement attractive.

2b. Overly Traditional Officer Traits:

Unrealistically hyper-masculine or idealized views of police officers.

373. An officer should not show fear in public.

95. The mission of a police officer is to enforce the law.

370. An officer's character can be seen in his or her lack of fear in the face of danger.

142. Nothing is more important to a police officer than the idea of honor and courage.

89. A good officer can assess a situation at a glance and sense trouble before it happens.

85. An officer should never allow a civilian to tell him or her how to do his or her job.

171. People who do wrong must be punished.

409. There is nothing more shameful than a cowardly police officer.

37. A good officer should never let a suspect know that he or she has doubts about the suspect's guilt.

151. Police work trains an officer to "figure out" what is going on in a criminal's mind.

2c. Suspiciousness:

Distrust or suspicion regarding the intent of others.

328. People will complain a great deal in order to get something they want.

101. Most people would use deception to get what they want.

127. Many people have sneaky plans to gain an advantage over others.

357. People are selfish.

12. People will lie and cheat to get what they want.

381. Everyone seems to want the rights, but not the responsibilities.

34. People will let you down.

407. Offenders will accuse the arresting officer of some misconduct, whether it is true or not.

399. Most agencies or departments experience some racial or gender-based trouble.

314. Many offenders get off on technicalities in court.

3. Unethical Behavior:

Beliefs and attitudes that are of questionable morality.

224. It may be necessary to "bend the rules" in order to work effectively in law enforcement.

450. Cops dislike Internal Affairs officers.

300. Police commanders have forgotten what it is like to be a street cop.

336. Sometimes deception is required to get what you want.

335. Police officers joke about the appearance of certain groups in the community.

372. Most departments do not support their officers enough.

283. An officer might try to "get even" with a suspect who has hit him or her.

364. Police departments do not have enough quality equipment.

354. People with "special influence" are always treated better than the average person.

110. Rules can get in the way of good police work.

3a. Lack of Personal Integrity:
Willingness to cross ethical boundaries, or transgress (e.g., lie, cheat) to protect self-interests.

344. A woman can use her sexual charms to make a man do something that he would not normally do.

283. An officer might try to "get even" with a suspect who has hit him or her.

271. Lying to avoid punishment is natural.

226. Sometimes you have to be a little mean to people before they will leave you alone.

389. Lying is an ordinary part of getting along in the world.

336. Sometimes deception is required to get what you want.

335. Police officers joke about the appearance of certain groups in the community.

354. People with "special influence" are always treated better than the average person.

402. It is hard to be patient with stupid people.

224. It may be necessary to "bend the rules" in order to work effectively in law enforcement.

3b. Negative Views of Department/Leadership:
Distrust or suspicion regarding departmental systems or individuals who are in charge.

372. Most departments do not support their officers enough.

300. Police commanders have forgotten what it is like to be a street cop.

318. Police departments don't do enough to help the families of officers who are killed in the line of duty.

364. Police departments do not have enough quality equipment.

153. Many bosses have forgotten what the job really requires.

268. Police departments need better leadership.

382. Commendations and promotions are based more on politics than on ability or work quality.

200. High-ranking supervisors don't concern themselves with the average officer.

227. If there were not so many boring procedures, police work would be very enjoyable.

302. Women cause more trouble for officers than men.

3c. Amorality:
Questionable ethical beliefs about police officers and others.

261. It is all right for an officer to lie in order to avoid hurting someone's feelings.

11. It is wrong to lie to a suspect, even if it is not against the rules to do so.

251. I would help a sick animal by putting it out of its misery with my firearm.

130. Officers should not cite other officers for minor traffic violations.

269. Police have a right to make the same mistakes that civilians do without being punished.

453. Minor mistakes by a police officer should be understood and forgiven.

355. Burglary work is better than Internal Affairs work.

174. Officers who do what they think is right will do more good than those who follow every regulation.

279. I could kill someone who had purposely hurt my family.

295. It is permitted to avoid laws and regulations, so long as you don't break them.

4. Unpredictability:
Risk taking and thrill seeking.

90. I am a thrill-seeker.

281. I like excitement and risk.

220. I love a rush of adrenaline.

181. I am adventurous.

420. I am not a risk-taker.

178. I'm athletic.

340. I am very competitive.

67. I feel best after an exciting or risky activity.

276. I like to try things I have never tried before.

41. I feel driven to become a police officer.

4a. Risk Taking:

High enjoyment of risks and thrills.

281. I like excitement and risk.
90. I am a thrill-seeker.
67. I feel best after an exciting or risky activity.
220. I love a rush of adrenaline.
420. I am not a risk-taker.

4b. Novelty Seeking:

Adventurous and prefers new and varied experiences.

139. I would love to travel to strange and foreign places.
276. I like to try things I have never tried before.
405. I am good at making people laugh.
253. I lead an interesting life.
144. I consider myself to be charming.
442. I prefer new and different experiences to those that are familiar.
181. I am adventurous.
193. I can tell when someone is being dishonest.

Appendix B
California POST Psychological Screening Dimensions

The M-PULSE Inventory includes 10 scales that are analogous to the Peace Officer Standards and Training (POST) screening dimensions that have been detailed by the California Commission. In the early part of this decade, Dr. Shelley Spillberg, the chief psychologist of the California POST Commission, commissioned the most comprehensive meta-analytic study of law enforcement selection to date. Dr. Spilberg and Dr. Deniz Ones, the Hellervic Chair of the University of Minnesota, Department of Psychology, amassed all published and unpublished research on police selection and related databases in order to determine which characterological or personality dimensions seemed of greatest relevance to law enforcement work (Ones, Viswesvaran, & Dilchert, 2004). The results of this seminal work identified 10 dimensions across several psychometric instruments. These dimensions, to be published in the California POST 2008 manual revision (S. Spilberg, personal comummunication, 2007 and 2008), will reflect areas of inquiry or understanding in the law enforcement selection. Upon its publication, the California POST manual will require police psychologists in that state to evaluate candidates with these 10 dimensions prior to making hiring decisions. These dimensions are likely to be a benchmark for pre-employment selection evaluations, and will have broad utility in the police psychology profession.

The M-PULSE Inventory POST scales are the same as the POST dimensions, only reversed (e.g., Social Competence on the POST becomes Social Incompetence on the M-PULSE Inventory). This reversal is done so that poor results are associated with high scores, and so that all the scales on the M-PULSE Inventory are consistent with each other. The following sections describe the key features of the POST dimensions. Readers unfamiliar with the POST document on standards and training are also referred to the original source for additional details (Ones et al., 2004).

Social Incompetence

High scores on this scale suggest a poor match with the Social Competence criteria of the POST. According to the POST, Social Competence involves the ability to communicate with others in a tactful and respectful way, as well as the ability to show sensitivity and concern. It includes the ability to "read" people, and understand how one's own behavior impacts on others. It involves sensitivity and concern for others' feelings, the use of tact when interacting with others, and impartiality in the treatment of others.

Lack of Teamwork

High scores on this scale suggest a poor match with the Teamwork component of the POST. According to the POST, Teamwork involves the ability to work effectively with others to achieve goals. Personal interests are put aside for the good of the team/agency. It involves establishing and maintaining good relationships with colleagues, as well as others who are involved with the agency in protecting the community.

Unreliability

High scores on this scale suggest a poor match with the Conscientiousness-Dependability component of the POST. Conscientiousness-Dependability involves diligent, reliable, conscientious work patterns. It involves completing assigned tasks successfully and in a timely fashion. It also involves punctuality, reliable attendance, and perseverance in the face of obstacles. According to the POST, conscientious and dependable individuals will also be organized, attentive to details, will stay current on rules and procedures, and willing to be accountable for their performance.

Reckless-Impulsivity

High scores on the Reckless–Impulsivity scale suggest a poor match with the Impulse Control–Attention to Safety component of the POST. As described in the POST, Impulse Control–Attention to Safety involves taking proper precautions and avoiding impulsive or risky behavior to help ensure public safety and officer safety. This area of the POST includes taking proper precautions in vehicle use, weapon use, emergency situations, and so forth.

Rigidity

High scores on the Rigidity scale suggest a poor match with the Adaptability-Flexibility component of the POST. Adaptability-Flexibility is the ability to appropriately adjust to changes and competing demands within law enforcement. It includes prioritizing work and managing several tasks when required. Adaptability-Flexibility is also about recognizing the difference between the written law and the intention or "spirit"of it. Individuals who have these capabilities work well in unstructured situations and with minimal supervision.

Lack of Integrity/Ethics

High scores on the Lack of Integrity/Ethics scale suggest a poor match with the Integrity-Ethics component of the POST. Integrity-Ethics describes individuals who have a high standard of personal conduct, and includes attributes such as honesty, impartiality, and trustworthiness. Individuals of this nature will not abuse the system, nor engage in immoral or illegal activities.

Emotional Instability–Stress Intolerance

High scores on the Emotional Instability–Stress Intolerance scale suggest a poor match with the Emotional Regulation and Stress Tolerance component of the POST. Emotional Regulation and Stress Tolerance is the ability to maintain composure and stay in control, particularly when under extreme stress. Individuals who do well in this area take criticism constructively, and are generally not overly affected by negative aspects of the job. A positive self image and controlled temperament are maintained even under adverse circumstances.

Poor Decision-Making and Judgment

High scores on the Poor Decision-Making and Judgment scale suggest a poor match with the Decision-Making and Judgment component of the POST. According to the POST, Decision-Making and Judgment includes the use of common sense, and involves good decision making skills. Individuals who are strong in this area can size up situations quickly and take appropriate action decisively. In complex situations, all relevant data can be absorbed and the critical aspects identified and examined.

Passivity–Submissiveness

High scores on the Passivity–Submissiveness scale suggest a poor match with the Assertiveness-Persuasiveness component of the POST. As described in the POST, Assertiveness-Persuasiveness is the ability to unhesitantly take control of situations in a calm and assertive way, even under difficult or dangerous conditions. It includes the ability to confront suspects, to not be intimidated, and to use force when necessary.

Substance Abuse

High scores on the Substance Abuse scale suggest a poor match with the Avoiding Substance Abuse and Other Risk-Taking Behavior component of the POST. As described in the POST, Avoiding Substance Abuse and Other Risk-Taking Behavior focuses on avoiding involvement in behavior that is inappropriate, self-damaging, or that could adversely affect functioning. Examples include alcohol abuse, drug abuse, or harmful gambling.

Table B.1. Brief Interpretation of High Scores on the California POST Scales

Scale	Brief Description of High Score
Social Incompetence	May have problems communicating with others in a tactful and respectful way.
Lack of Teamwork	May have problems working effectively with others to achieve goals.
Unreliability	May have problems maintaining diligent, reliable, conscientious work patterns.
Reckless-Impulsivity	May be predisposed to impulsive or risky behavior.
Rigidity	May handle change poorly, showing inflexibility or difficulty managing change or complex situations.
Lack of Integrity/Ethics	Opinions regarding morality and ethical situations seem questionable.
Emotional Instability–Stress Intolerance	May have trouble staying calm and composed in difficult situations. Coping skills for handling stress may be poor.
Poor Decision-Making & Judgment	May use impractical approaches to solving problems. May have difficulty sizing up situations and taking the proper action.
Passivity–Submissiveness	May be too submissive and yielding in situations where assertiveness is required.
Substance Abuse	May indicate proneness to behavior that is inappropriate or self-damaging (e.g., alcohol abuse, drug abuse, or gambling).

Appendix C
Maximum Allowable Number of
Omitted Items Per Subscale

Scale	Omitted Items	Scale	Omitted Items	Scale	Omitted Items	Scale	Omitted Items
Validity Scales		**Liability Scales**		**Empirical Scales**		**POST Scales**	
Impression Management	1	Interpersonal Difficulties	2	**Negative Self-Issues**	6	Social Incompetence	1
Test Attitude	1	Chemical Abuse/ Dependency	2	Negative Emotions	1	Lack of Teamwork	1
		Off-Duty Misconduct	2	Egocentricism	2	Unreliability	1
		Procedural and Conduct Mistakes	2	Inadequate Views of Police Work	1	Reckless–Impulsivity	2
		Property Damage	2	Poor Emotional Controls	1	Rigidity	2
		Misuse of Vehicle	2	**Negative Perceptions Related to Law Enforcement**	3	Lack of Integrity/Ethics	2
		Motor Vehicle Accidents	2	Inappropriate Attitudes About the Use of Force	1	Emotional Instability– Stress Tolerance	2
		Discharge of Weapon	2	Overly Traditional Officer Traits	1	Poor Decision-Making & Judgment	1
		Inappropriate Use of Weapon	2	Suspiciousness	1	Passivity– Submissiveness	1
		Unprofessional Conduct	2	**Unethical Behavior**	1	Substance Abuse	1
		Excessive Force	2	Lack of Personal Integrity	1		
		Racially Offensive Conduct	2	Negative Views of Department/Leadership	1		
		Sexually Offensive Conduct	2	Amorality	1		
		Lawsuit Potential	1	**Unpredictability**	1		
		Criminal Conduct	2	Risk Taking	1		
		Reprimands/Suspensions	2	Novelty Seeking	1		
		Potential for Resignation	2				
		Potential for Termination	2				

Appendix D
Sample M-PULSE™ Inventory
Profile Report

Figure D.1. Sample M-PULSE Inventory Profile Report

Robert D. Davis, Ph.D., M.P., and Cary D. Rostow, Ph.D., M.P.

Profile Report

Client's Name: **Joe Sample**

Age: 33
Gender: Male
Test Duration: N/A - QuikEntry
Administration Date: April 07, 2008 (Online)
Assessment Number: 447353

Cautionary Note: Use and interpretation of this report is the responsibility of the user; the authors and publisher are not responsible for the misuse of this tool, or for any misinterpretations made.

Figure D.2. Sample M-PULSE Inventory Profile Report (continued)

Validity Scales

The following graph shows the results for the M-PULSE Inventory Validity Scales.

Impression Management

Test Attitude

Probably Valid   Possibly Invalid   Probably Invalid
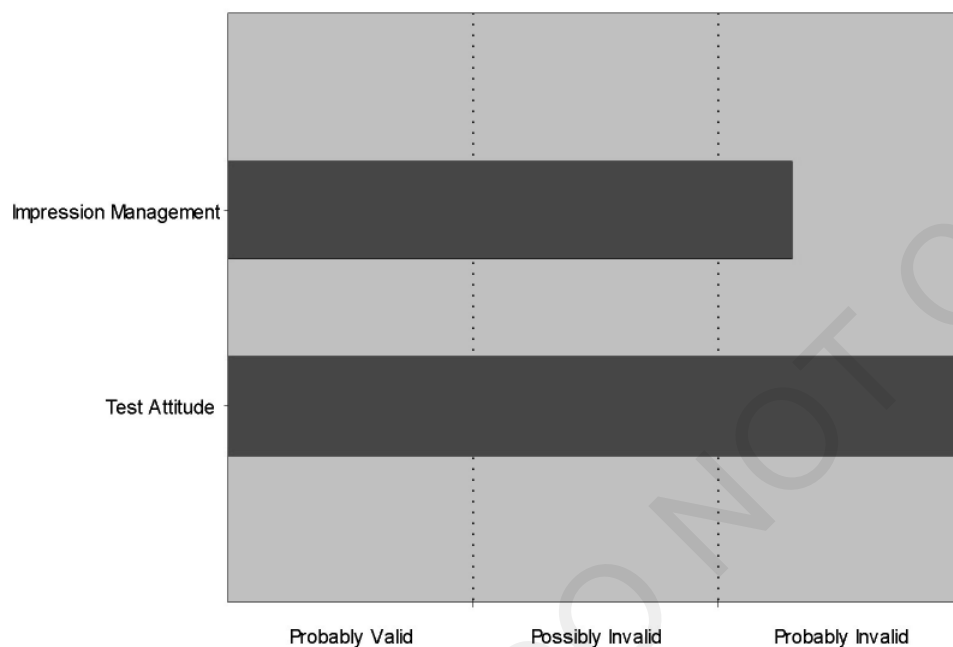
Validity Summary

Significant elevations were noted for the following Validity Scale(s):

Test Attitude
Impression Management

The validity of the administration may be questionable.

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Figure D.3. Sample M-PULSE Inventory Profile Report (continued)

Liability Scales

The following graph shows the results for the M-PULSE Inventory Liability Scales.
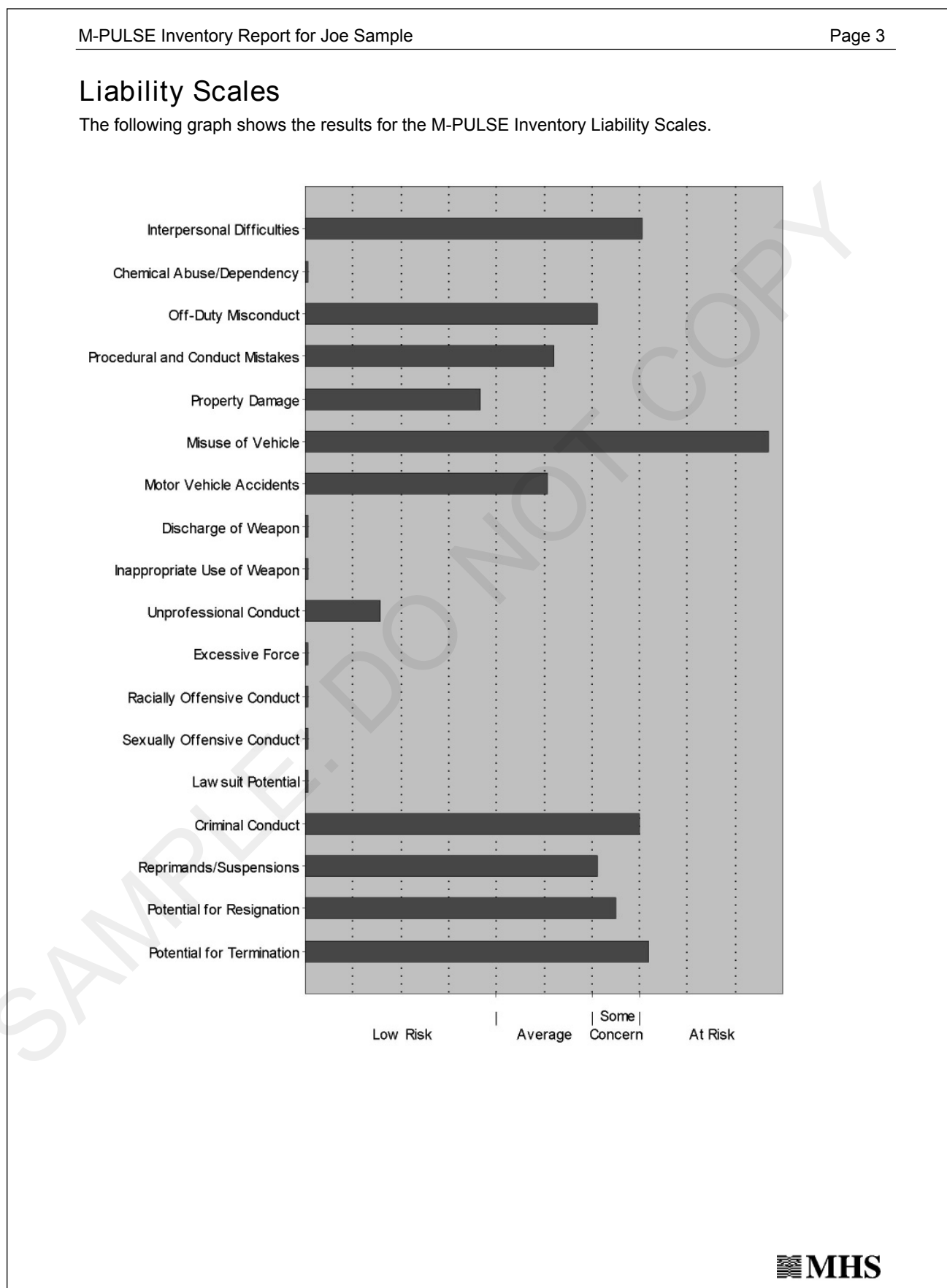
Figure D.4. Sample M-PULSE Inventory Profile Report (continued)

Empirical Scales

The following graph shows the results for the M-PULSE Inventory Empirical Scales.
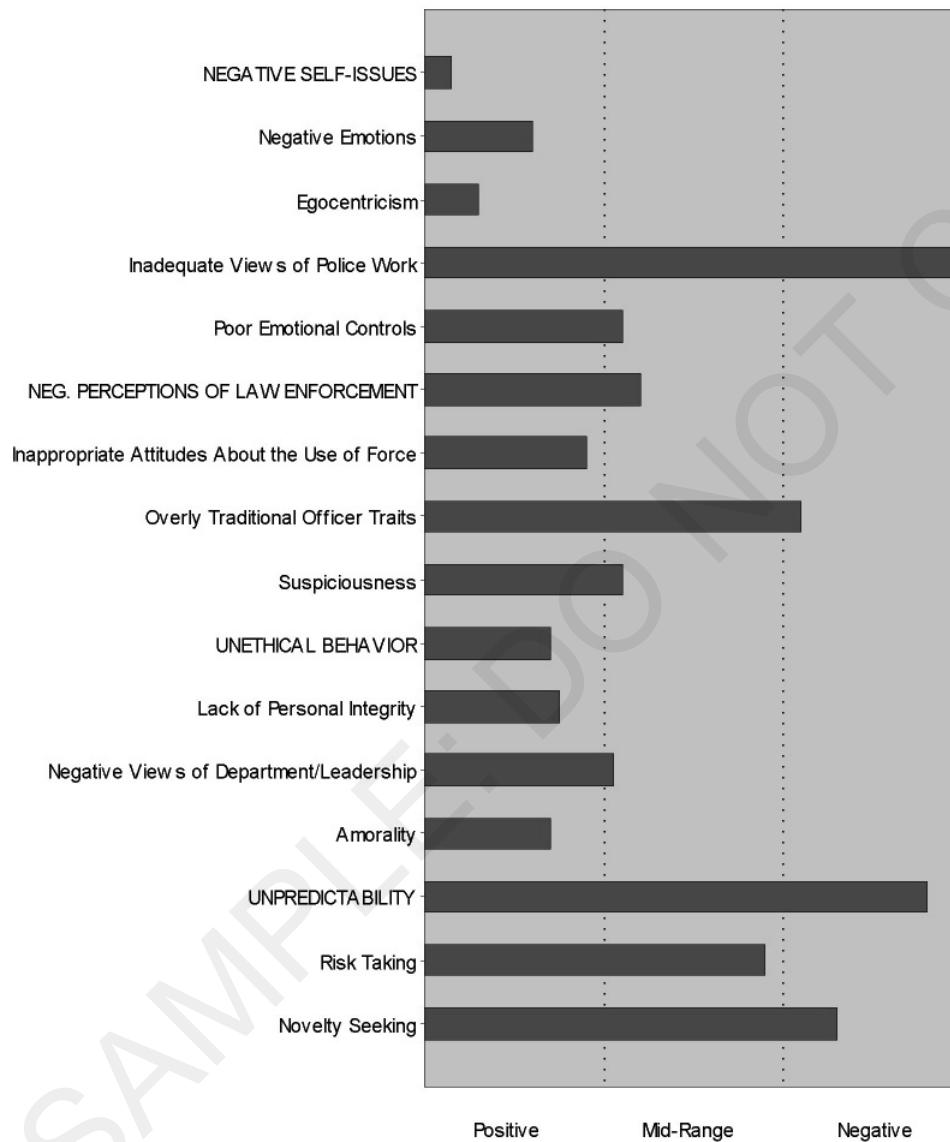
Figure D.5. Sample M-PULSE Inventory Profile Report (continued)

California POST Psychological Screening Dimensions

The following graph shows the results for the M-PULSE Inventory California POST Psychological Screening Dimensions.

- Social Incompetence
- Lack of Teamwork
- Unreliability
- Reckless-Impulsivity
- Rigidity
- Lack of Integrity/Ethics
- Emotional Instability-Stress Intolerance
- Poor Decision-Making and Judgment
- Passivity-Submissiveness
- Substance Abuse

Possible Strength Area   Average   Possible Area of Concern

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Figure D.6. Sample M-PULSE Inventory Profile Report (continued)

Administrative Section

The remainder of this report provides the raw and standard scores for each M-PULSE Inventory Scale, as well as the responses to each item. This information is useful if you want to further explore the candidate's scores.

Validity Scales

Scale	Raw Score	T-Score	Interpretation
Impression Management	45	73	Probably Invalid
Test Attitude	10	81	Probably Invalid

Liability Scales

Scale	Raw Score	T-Score	Interpretation
Interpersonal Difficulties	2.05	74	At Risk
Chemical Abuse/Dependency	-6.08	49	Low Risk
Off-Duty Misconduct	1.10	67	Some Concern
Procedural and Conduct Mistakes	0.21	53	Average
Property Damage	-1.34	51	Low Risk
Misuse of Vehicle	4.70	79	At Risk
Motor Vehicle Accidents	0.07	58	Average
Discharge of Weapon	-8.71	44	Low Risk
Inappropriate Use of Weapon	-16.90	27	Low Risk
Unprofessional Conduct	-3.42	36	Low Risk
Excessive Force	-8.61	34	Low Risk
Racially Offensive Conduct	-16.04	43	Low Risk
Sexually Offensive Conduct	-5.81	42	Low Risk
Lawsuit Potential	-10.75	46	Low Risk
Criminal Conduct	2.01	71	At Risk
Reprimands/Suspensions	1.10	60	Some Concern
Potential for Resignation	1.50	57	Some Concern
Potential for Termination	2.18	63	At Risk

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Figure D.7. Sample M-PULSE Inventory Profile Report (continued)

Empirical Scales

Scales	Raw Score	T-Score	Interpretation
NEGATIVE SELF-ISSUES	350	23	Positive
Negative Emotions	99	32	Positive
Egocentricism	137	26	Positive
Inadequate Views of Police Work	89	80	Negative
Poor Emotional Controls	25	42	Mid-Range
NEG. PERCEPTIONS OF LAW ENFORCEMENT	172	44	Mid-Range
Inappropriate Attitudes About the Use of Force	65	38	Positive
Overly Traditional Officer Traits	49	62	Negative
Suspiciousness	51	42	Mid-Range
UNETHICAL BEHAVIOR	87	34	Positive
Lack of Personal Integrity	28	35	Positive
Negative Views of Department/Leadership	29	41	Mid-Range
Amorality	30	34	Positive
UNPREDICTABILITY	60	76	Negative
Risk Taking	16	58	Mid-Range
Novelty Seeking	20	66	Negative

California POST Psychological Screening Dimensions

Scale	Raw Score	T-Score	Interpretation
Social Incompetence	87	74	Possible Area of Concern
Lack of Teamwork	78	70	Possible Area of Concern
Unreliability	74	75	Possible Area of Concern
Reckless-Impulsivity	72	64	Possible Area of Concern
Rigidity	119	69	Possible Area of Concern
Lack of Integrity/Ethics	125	72	Possible Area of Concern
Emotional Instability-Stress Intolerance	100	67	Possible Area of Concern
Poor Decision-Making and Judgment	29	75	Possible Area of Concern
Passivity-Submissiveness	31	53	Average
Substance Abuse	17	51	Average

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Figure D.8. Sample M-PULSE Inventory Profile Report (continued)

Item Response Table

This table lists Joe's individual responses to each item. Omitted items are identified with a question mark.

Item #	Response	Item #	Response	Item #	Response	Item #	Response	Item #	Response
1.	1	41.	3	81.	2	121.	2	161.	3
2.	1	42.	1	82.	2	122.	2	162.	2
3.	2	43.	2	83.	2	123.	2	163.	1
4.	4	44.	2	84.	1	124.	2	164.	2
5.	3	45.	3	85.	3	125.	2	165.	1
6.	4	46.	1	86.	2	126.	2	166.	3
7.	2	47.	2	87.	2	127.	3	167.	2
8.	3	48.	4	88.	2	128.	2	168.	4
9.	2	49.	3	89.	3	129.	3	169.	2
10.	4	50.	2	90.	2	130.	1	170.	3
11.	4	51.	3	91.	2	131.	2	171.	2
12.	3	52.	1	92.	1	132.	4	172.	2
13.	2	53.	2	93.	1	133.	4	173.	1
14.	4	54.	3	94.	1	134.	2	174.	2
15.	2	55.	4	95.	2	135.	3	175.	2
16.	1	56.	3	96.	3	136.	2	176.	4
17.	2	57.	1	97.	4	137.	2	177.	4
18.	3	58.	3	98.	2	138.	3	178.	3
19.	2	59.	2	99.	3	139.	2	179.	2
20.	1	60.	4	100.	1	140.	4	180.	3
21.	2	61.	3	101.	2	141.	2	181.	2
22.	3	62.	3	102.	2	142.	3	182.	1
23.	2	63.	1	103.	3	143.	1	183.	2
24.	1	64.	2	104.	2	144.	3	184.	3
25.	1	65.	4	105.	3	145.	2	185.	2
26.	1	66.	3	106.	4	146.	2	186.	1
27.	2	67.	2	107.	2	147.	2	187.	3
28.	4	68.	1	108.	1	148.	4	188.	2
29.	2	69.	3	109.	2	149.	4	189.	2
30.	4	70.	1	110.	3	150.	3	190.	4
31.	2	71.	2	111.	1	151.	2	191.	3
32.	2	72.	4	112.	2	152.	1	192.	2
33.	2	73.	3	113.	3	153.	3	193.	1
34.	1	74.	2	114.	3	154.	3	194.	3
35.	1	75.	1	115.	2	155.	2	195.	2
36.	2	76.	2	116.	2	156.	2	196.	4
37.	3	77.	2	117.	3	157.	3	197.	3
38.	4	78.	3	118.	2	158.	4	198.	2
39.	4	79.	3	119.	1	159.	2	199.	3
40.	3	80.	2	120.	1	160.	2	200.	1

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Figure D.9. Sample M-PULSE Inventory Profile Report (continued)

Item Response Table (continued)

Item #	Response	Item #	Response	Item #	Response	Item #	Response	Item #	Response
201.	3	241.	4	281.	3	321.	2	361.	3
202.	3	242.	1	282.	1	322.	4	362.	1
203.	2	243.	1	283.	2	323.	3	363.	4
204.	4	244.	2	284.	4	324.	2	364.	4
205.	4	245.	4	285.	4	325.	1	365.	3
206.	1	246.	3	286.	4	326.	2	366.	4
207.	3	247.	1	287.	4	327.	4	367.	4
208.	1	248.	3	288.	2	328.	3	368.	4
209.	2	249.	1	289.	3	329.	4	369.	2
210.	4	250.	2	290.	2	330.	2	370.	3
211.	3	251.	4	291.	4	331.	3	371.	2
212.	2	252.	4	292.	4	332.	4	372.	1
213.	3	253.	3	293.	1	333.	4	373.	1
214.	1	254.	1	294.	2	334.	4	374.	1
215.	2	255.	4	295.	4	335.	2	375.	1
216.	1	256.	4	296.	3	336.	1	376.	2
217.	2	257.	4	297.	2	337.	1	377.	3
218.	4	258.	3	298.	2	338.	3	378.	2
219.	3	259.	1	299.	2	339.	2	379.	1
220.	4	260.	3	300.	3	340.	4	380.	2
221.	2	261.	2	301.	2	341.	2	381.	3
222.	3	262.	2	302.	3	342.	1	382.	3
223.	2	263.	3	303.	4	343.	1	383.	2
224.	2	264.	4	304.	3	344.	2	384.	3
225.	4	265.	4	305.	1	345.	3	385.	2
226.	3	266.	2	306.	2	346.	1	386.	2
227.	2	267.	3	307.	4	347.	2	387.	2
228.	1	268.	4	308.	3	348.	4	388.	1
229.	1	269.	2	309.	2	349.	4	389.	1
230.	2	270.	4	310.	3	350.	4	390.	2
231.	2	271.	4	311.	2	351.	2	391.	3
232.	2	272.	2	312.	4	352.	3	392.	2
233.	3	273.	1	313.	4	353.	1	393.	2
234.	1	274.	3	314.	2	354.	2	394.	1
235.	2	275.	4	315.	4	355.	4	395.	2
236.	2	276.	2	316.	3	356.	4	396.	2
237.	2	277.	3	317.	4	357.	2	397.	2
238.	3	278.	4	318.	4	358.	4	398.	2
239.	4	279.	2	319.	1	359.	4	399.	3
240.	4	280.	4	320.	1	360.	2	400.	1

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Figure D.10. Sample M-PULSE Inventory Profile Report (continued)

Item Response Table (continued)

Item #	Response	Item #	Response	Item #	Response	Item #	Response	Item #	Response
401.	2	412.	2	423.	2	434.	4	445.	4
402.	1	413.	2	424.	1	435.	4	446.	4
403.	3	414.	2	425.	1	436.	3	447.	1
404.	4	415.	2	426.	2	437.	2	448.	2
405.	4	416.	4	427.	2	438.	1	449.	3
406.	4	417.	4	428.	4	439.	2	450.	1
407.	2	418.	2	429.	3	440.	4	451.	2
408.	1	419.	4	430.	4	441.	4	452.	4
409.	3	420.	2	431.	2	442.	3	453.	2
410.	3	421.	1	432.	3	443.	2	454.	4
411.	2	422.	1	433.	4	444.	4	455.	3

Date Printed: Tuesday, April 08, 2008
End of Report

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